Naval Facilities Engineering Command, Southwest Contracts Department 1220 Pacific Highway, Building 127, Room 112 San Diego, California 92132-5190

CONTRACT No. N68711-04-D-1104 CTO No. 0010

FINAL GROUNDWATER MONITORING REPORT UST SITE 14137

August 21, 2006

MARINE CORPS BASE CAMP PENDLETON, CALIFORNIA

DCN: SES-TECH-06-0156

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SES-TECH

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ABBREVIATIONS AND ACRONYMS

amsl above mean sea level

BTEX benzene, toluene, ethylbenzene, and total xylenes

CTO Contract Task Order

DEH Department of Environmental Health

DO dissolved oxygen

DOT Department of Transportation

EPA U.S. Environmental Protection Agency

ft/ft feet per foot

LCS laboratory control sample

LCSD laboratory control sample duplicate

MCB Marine Corps Base
mg/L milligrams per liter
μg/L micrograms per liter
MTBE methyl tert-butyl ether

ORP oxidation/reduction potential

PAH polynuclear aromatic hydrocarbon

QC quality control RL reporting limit

RPD relative percent difference

RWQCB Regional Water Quality Control Board

SAP Sampling and Analysis Plan

TPH-d total petroleum hydrocarbons quantified as diesel

UST Underground Storage Tank
VOC volatile organic compound

Water Board California Regional Water Quality Control Board

1.0 INTRODUCTION

This Groundwater Monitoring Report, prepared by SES-TECH, a joint venture between Sealaska Environmental Services LLC and Tetra Tech EC, Inc., presents the results of groundwater sampling completed in June 2006 at Underground Storage Tank (UST) Site 14137 at the Marine Corps Base (MCB) Camp Pendleton, California (Figures 1-1 and 1-2). This groundwater sampling event is the first of four quarterly sampling events proposed to be completed as part of the monitored natural attenuation remedial alternative requested for the site in the Corrective Action Plan (SES-TECH, 2006). The groundwater sampling activities conducted at the site, as well as the associated reporting activities, were performed under Contract Task Order No. 0010 for the Naval Facilities Engineering Command, Southwest Indefinite Delivery/Indefinite Quantity Contract No. N68711-04-D-1104.

1.1 SCOPE OF WORK

Groundwater monitoring at UST Site 14137 included measuring water levels and collecting and analyzing groundwater samples. During the June 2006 sampling event, all four wells at the site were sampled. The samples were analyzed for total petroleum hydrocarbons quantified as diesel (TPH-d); volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), and other fuel oxygenates; and polynuclear aromatic hydrocarbon (PAHs). As well as analyzing for contaminants of concern, samples were also analyzed for parameters to evaluate natural attenuation. Laboratory analysis for nitrate and sulfate, along with field measurements of dissolved oxygen (DO) and the oxidation/reduction potential (ORP) were performed. Moreover, iron (II) analyses were performed in the field using a kit specifically designed for this purpose.

1.2 SITE IDENTIFICATION

Site identification data:

Site Address: Building 14137, 14 Area, MCB Camp Pendleton, CA 92055

Facility Name: Combat Skills Training School

County of San Diego

Department of

Environmental Health

(**DEH**) Case No.: H05939-026

California Regional Water Quality Control Board (Water Board, formerly RWQCB)

Case No.: 9UT640

Responsible Party: United States Marine Corps

Contact Person: Mr. Chet Storrs, Remediation Branch Manager

Assistant Chief of Staff, Environmental Security

Building 22165, Box 555008

MCB Camp Pendleton, California 92055-5008

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1220 Pacific Highway

San Diego, CA 92132-5190

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CTO No. 0010, 08/21/06

2.0 GROUNDWATER SAMPLING

The following sections summarize the June 2006 quarterly sampling event, the first of four consecutive events to be completed at UST Site 14137.

2.1 WATER LEVEL MEASUREMENTS

As part of the groundwater sampling event, the depth to water and the total depth of each well were measured from the top of the well casing and recorded on a well sampling log (Appendix A). Water levels in the three wells installed in 1998 (MW1, MW2, and MW3) were all above their respective screened intervals. Table 2-1 provides a summary of the groundwater elevation data.

A groundwater elevation contour map was prepared based on the most recently recorded water levels (Figure 2-1).

2.2 SAMPLING METHODOLOGY

On June 27, 2006, all monitoring wells (MW1, MW2, MW3, MW5, MW6, and MW7) were sampled using low-flow sampling methodology. Before sampling, a bladder pump was slowly lowered into each well and positioned approximately 2 feet below the surface of the groundwater table. In addition, a water-level indicator was placed at the water surface to monitor water-level drawdown during purging. While purging at the lowest operational setting of the pump, which was approximately 100 milliliters per minute, the water level surface began to slowly drop and exceeded the minimum drawdown requirement of 0.33 feet at all wells except MW6.

Because a stabilized water level could not be achieved, even at very low pumping rates, a passive or minimum purge sampling method was performed following the methodology presented in a U.S. Environmental Protection Agency (EPA) Groundwater Issue paper titled *Low Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (Puls and Barcelona, 1996). The passive/minimal purge approach requires the removal of a minimum of three volumes of the sampling system from each well. The liquid volume of the sampling system consists of the volume of the pump's bladder, discharge tubing, and flow through cell attached to the water quality meter. After purging the required volume at the lowest flow rate achievable for each well, a groundwater sample was collected.

To monitor groundwater conditions during purging, water-quality parameters were measured as follows: temperature, pH, electrical conductivity, turbidity, dissolved oxygen, and oxygen/reduction potential. These measurements were recorded on the well sampling logs provided in Appendix A. After purging the required volume at the lowest flow rate achievable for each well, a groundwater sample was collected. Groundwater samples were collected through new disposable polyethylene discharge tubing connected to the bladder pump. Each sample was

collected in the appropriate containers, labeled, and placed in a cooler with ice immediately after sample collection for delivery to the analytical laboratory.

All non-disposable down-hole equipment, such as the bladder pump and water-level indicator, were decontaminated before sampling each well.

2.3 SAMPLE ANALYSES

Groundwater samples were delivered by courier to EMAX Laboratories in Torrance, California, for analysis of TPH-d using EPA Method 8015B, VOCs using EPA Method 8260B, and PAHs using EPA Method 8270C. To continue evaluating the site for potential natural attenuation of groundwater, samples were analyzed for nitrate and sulfate by EPA Method 300.0. On-site analysis for ferrous iron [iron (II)] was completed using a Hach IR-18C field kit and documented for each well on the well sampling forms (Appendix A).

2.4 WASTE MANAGEMENT

All equipment decontamination water and groundwater generated from well purging were temporarily contained in Department of Transportation (DOT)-approved drums and stored on site. The drums were closed, marked, labeled, and located to minimize traffic hazards and discourage tampering. The wastewater drums were transported off site for disposal at a waste-permitted facility. The handling, management, transportation, and disposal of wastewater were conducted in accordance with state and federal laws and regulations. No wastes were stored at the site for more than 60 days. A copy of the waste manifest is provided in Appendix B.

3.0 GROUNDWATER MONITORING RESULTS

Groundwater flow and analytical results from the June 2006 sampling event are discussed in the following subsections.

3.1 GROUNDWATER FLOW DIRECTION

Groundwater elevations measured during the June 2006 event are presented in Figure 2-1.

As shown on Figure 2-1, groundwater elevations at the site ranged from 277.43 feet above mean sea level (amsl) at MW4 and MW6 to 273.93 feet amsl at MW5. Based on water levels measured in June 2006, groundwater is flowing toward the south/southeast with an approximate gradient of 0.032 feet per foot (ft/ft).

3.2 ANALYTICAL RESULTS

A total of six groundwater samples (plus a field duplicate, a trip blank, and an equipment rinsate sample) were collected during the June 2006 event and sent to EMAX Laboratories for analysis. The analytical results were successfully uploaded to the Water Board Geotracker database (Confirmation No. 5100168466). A summary of groundwater sampling results is presented in Table 3-1 and summarized on Figure 2-1. Copies of the analytical laboratory reports and chain-of-custody forms are provided in Appendix C.

TPH-d was detected in wells MW2 and MW7 only, at concentrations of 2.4 and 0.15 milligrams per liter (mg/L), respectively.

Samples from wells MW2 and MW7 also indicated the presence of methyl tert-butyl ether at concentrations comparable to those detected during the March 2006 sampling event (9.9 μ g/L and 0.48 μ g/L, respectively). No other VOCs were detected in any of the wells.

PAHs were not detected in any of the monitoring wells.

3.3 NATURAL ATTENUATION PARAMETERS ANALYTICAL RESULTS

As discussed in Section 2.3, in addition to analyzing for contaminants of concern, samples from all wells were also analyzed for parameters to be used for evaluation of natural attenuation of groundwater. Laboratory analyses for nitrate and sulfate, along with field measurements of DO and ORP, were performed. Furthermore, iron (II) analyses were performed in the field using a kit designed specifically for this purpose. These analytical results and field measurements are summarized in Table 3-2. Purging and sampling data sheets with the recorded ORP and DO readings and iron (II) results for each well are provided in Appendix A.

4.0 QUALITY ASSURANCE AND QUALITY CONTROL

This section summarizes the quality assurance and quality control (QC) results for the June 2006 groundwater monitoring event.

All groundwater samples were collected and preserved in accordance with the *San Diego County DEH Site Assessment and Mitigation Manual 2004* (DEH, 2004), and were delivered to the analytical laboratory within 24 hours of sample collection by a laboratory courier and analyzed within the method-specified analytical holding times. EMAX Laboratories, Inc., a state of California-certified and Naval Facility Engineering Service Center evaluated laboratory, performed sample analyses.

One field duplicate sample was collected from monitoring well MW2 (identified as 10-14137-035). The analytical results for the duplicate sample correlated well with the primary sample results (identified as 10-14137-034). The relative percent differences (RPDs) for detected target analytes such as TPH-d and MTBE were zero percent, indicating an excellent agreement between the field sample and its duplicate.

To assess potential cross-contamination of VOCs during sample transport, one trip blank sample (identified as 10-14137-028) was sent along with groundwater samples to the laboratory and analyzed for VOCs. In addition, one equipment rinsate sample was collected (identified as 10-14137-036) to assess potential cross-contamination of VOCs, TPH-d, and PAHs from equipment used for sampling. Detectable levels of target analytes were not reported above half the project reporting limits (RLs) in either the trip blank or the equipment rinsate sample indicating that the sample transport and decontamination procedure yielded no cross-contamination during this sampling event.

In accordance with analytical method specifications, method blanks, surrogate spikes, laboratory control samples (LCSs), and laboratory control sample duplicates (LCSDs) were analyzed to assess method accuracy and precision.

No detectable levels of target analytes were found in the method blanks during this event. Percent recoveries in LCS, LCSD, and surrogates and RPDs between the spiked duplicates were well within the project-specified QC acceptance limits. One of the LCSs for acenaphthene and acenaphthylene were recovered slightly lower than the project QC acceptance limits. The acceptable second LCS recoveries indicated method control.

In accordance with the Sampling and Analysis Plan (SAP) (SES-TECH, 2005), Validata Chemical Services, Inc., a third-party validation company, located in Duluth, Georgia, performed EPA Level III/IV validation of analytical data. For this sampling event, 1 sample was validated according to the EPA Level IV protocol, and 8 samples (including field QC samples) were

validated according to the EPA Level III protocol. The validation reported that all of the applicable criteria were met for all of the samples.

5.0 SUMMARY

Based on water-level measurements recorded for the June 2006 event, groundwater beneath the site flows to the south with a gradient of approximately 0.032 ft/ft. Groundwater elevations at the site ranged from 277.43 feet amsl at MW1 and MW6 to 273.93 feet amsl at MW5.

The analytical results for the June 2006 groundwater sampling event were successfully uploaded to the Water Board Geotracker database (Confirmation No. 5100168466). During the June 2006 event, TPH-d (at 2.4 and 0.15 mg/L) and MTBE (at 9.9 and 0.48 μ g/L) were detected in two of the six wells.

This sampling event was the first of four consecutive quarterly events to be completed to support site closure. The second quarterly event is currently scheduled for September 2006. SES-TECH will continue to execute this sampling scheme and make a recommendation concerning further corrective action, if appropriate, upon its completion.

6.0 REFERENCES

- Puls R. and M.J. Barcelona. 1996. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. April.
- SES-TECH. 2005. Final Sampling and Analysis Plan UST Site 14121,MCB Camp Pendleton (Field Sampling Plan and Quality Assurance Project Plan, Revision 1. April 29.
- SES-TECH. 2006. Final Corrective Action Plan for UST Site 14137, MCB Camp Pendleton. June
- San Diego County Department of Environmental Health, Land and Water Quality Division (DEH). 2004. San Diego County Site Assessment and Mitigation Manual 2004.

TABLES

TABLE 2-1

SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS, UST SITE 14137, MCB CAMP PENDLETON, CA

Monitoring Well ID	Well Screen Interval (feet btoc)	Interval (toc) Elevation Date Measured of		Depth to Water (feet btoc)	Groundwater Elevation (feet amsl)
		284.56	12/1/1998	6.19	278.37
MW1	10 - 20		3/14/2006	6.84	277.72
			6/19/2006	7.13	277.43
			12/1/1998	6.74	277.28
MW2	10 - 20	284.02	3/14/2006	7.29	276.73
			6/19/2006	7.60	276.42
	10 – 20		12/1/1998	7.38	275.38
MW3		282.76	3/14/2006	7.66	275.10
			6/19/2006	7.72	275.04
MW5	5 – 15	282.04	3/14/2006	7.70	274.34
IVI VV 3	3 – 13	202.04	6/19/2006	8.11	273.93
			12/1/1998	6.58	278.31
MW6	5 – 15	284.89	3/14/2006	6.74	278.15
			6/19/2006	7.46	277.43
MW7	5 – 15	283.13	3/14/2006	7.82	275.31
141 44 /	3 – 13	203.13	6/19/2006	8.13	275.00

Notes:

amsl - above mean sea level btoc - below top of casing

MCB - Marine Corps Base

toc - top of casing

UST - Underground Storage Tank

TABLE 3-1

SUMMARY OF HISTORICAL GROUNDWATER SAMPLING RESULTS, UST SITE 14137, MCB CAMP PENDLETON, CA

							VOCs (με	g/L)			
Well ID	Date Sampled	Sample ID	р-нд І (mg/L)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	MTBE	Bromodichloromethane	Dibromodichloromethane	eg PAHs
MW1	03/14/06	0004-120									
IVI VV I	06/27/06	10-14137-030									
	03/14/06	0004-121	2.2					9.5			
MW2	06/27/06	10-14137-034	2.4					9.9			
		10-14137-035 (Dup)	2.4					9.9			
MW3	03/14/06	0004-123									
IVI W 3	06/27/06	10-14137-032									
MW5	03/14/06	0004-122									
IVI VV 3	06/27/06	10-14137-031									
MW6	03/14/06	0004-119									
IVI VV U	06/27/06	10-14137-029									
_	03/14/06	0004-124	0.25					0.41 J	0.3 J	0.32 J	
MW7	03/14/00	0004-125 (Dup)	0.26					0.44 J	0.31 J	0.33 J	
	06/27/06	10-14137-033	0.15					0.48J			

Notes:

-- - not detected above project reporting limits

 $\mu g/L$ - micrograms per liter

Dup - duplicate sample

J - estimated value

MCB - Marine Corps Base

mg/L - milligrams per liter

MTBE - methyl tert-butyl ether

PAH - polynuclear aromatic hydrocarbon

TPH-d - total petroleum hydrocarbons quantified as diesel

UST - Underground Storage Tank VOC - volatile organic compound

SUMMARY OF GROUNDWATER RESULTS FOR EVALUATION OF NATURAL ATTENUATION UST SITE 14137 MCB CAMP PENDLETON, CA

Monitoring Well ID	Date Sampled	Sample ID	Nitrate(1) (mg/L)	Sulfate(1) (mg/L)	Iron (II)(2) (mg/L)	Dissolved Oxygen ⁽³⁾ (mg/L)	ORP ⁽³⁾ (mV)
MW1	26-Jun-06	10-14137-030		78.8	0.0	0.09	-46
MW2	26-Jun-06	10-14137-034		90.7	0.2	0.38	-103
IVI VV Z	26-Jun-06	10-14137-035 (Dup)	-	90.8	0.0	0.63	-88
MW3	26-Jun-06	10-14137-032	-	161	0.0	1.48	-17
MW5	26-Jun-06	10-14137-031		156	0.0	1.50	42
MW6	26-Jun-06	10-14137-029	-	173	0.0	0.99	25
MW7	26-Jun-06	10-14137-033		133	0.0	4.48	213
		Reporting Limits	0.1	0.5	(4)	(4)	(4)

Notes:

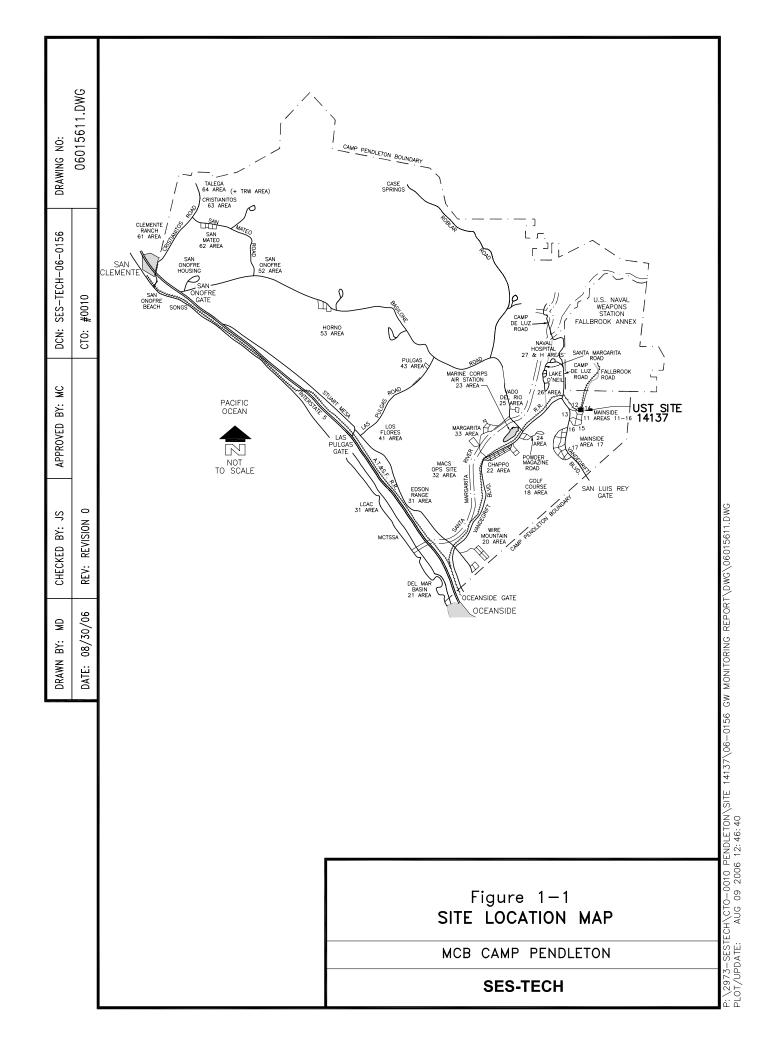
 $(1) - Analyzed by EPA Method 300.0 \\ MCB - Marine Corps Base \\ (2) - Ferrous iron by Hach IR-18C field kit \\ mg/L - milligrams per liter$

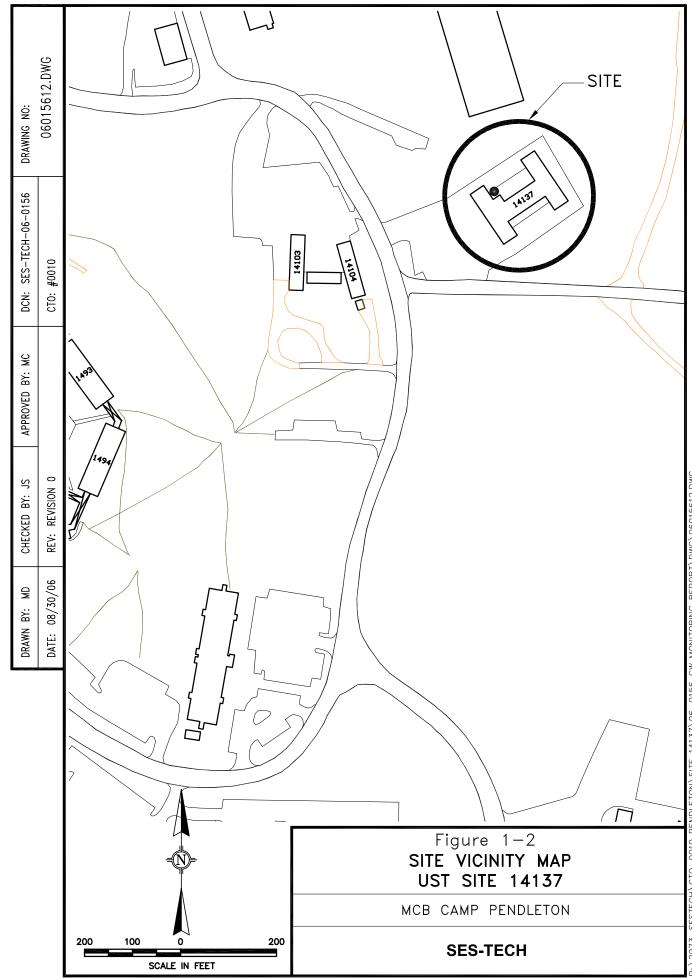
 $\mbox{(3) - Parameters measured using field instruments} \mbox{ } \mbox{ } \mbox{mV - millivolts} \label{eq:mV - millivolts}$

(4) - Not applicable for field measurements ORP - oxidation/reduction potential
-- - not detected above laboratory reporting limit UST - Underground Storage Tank

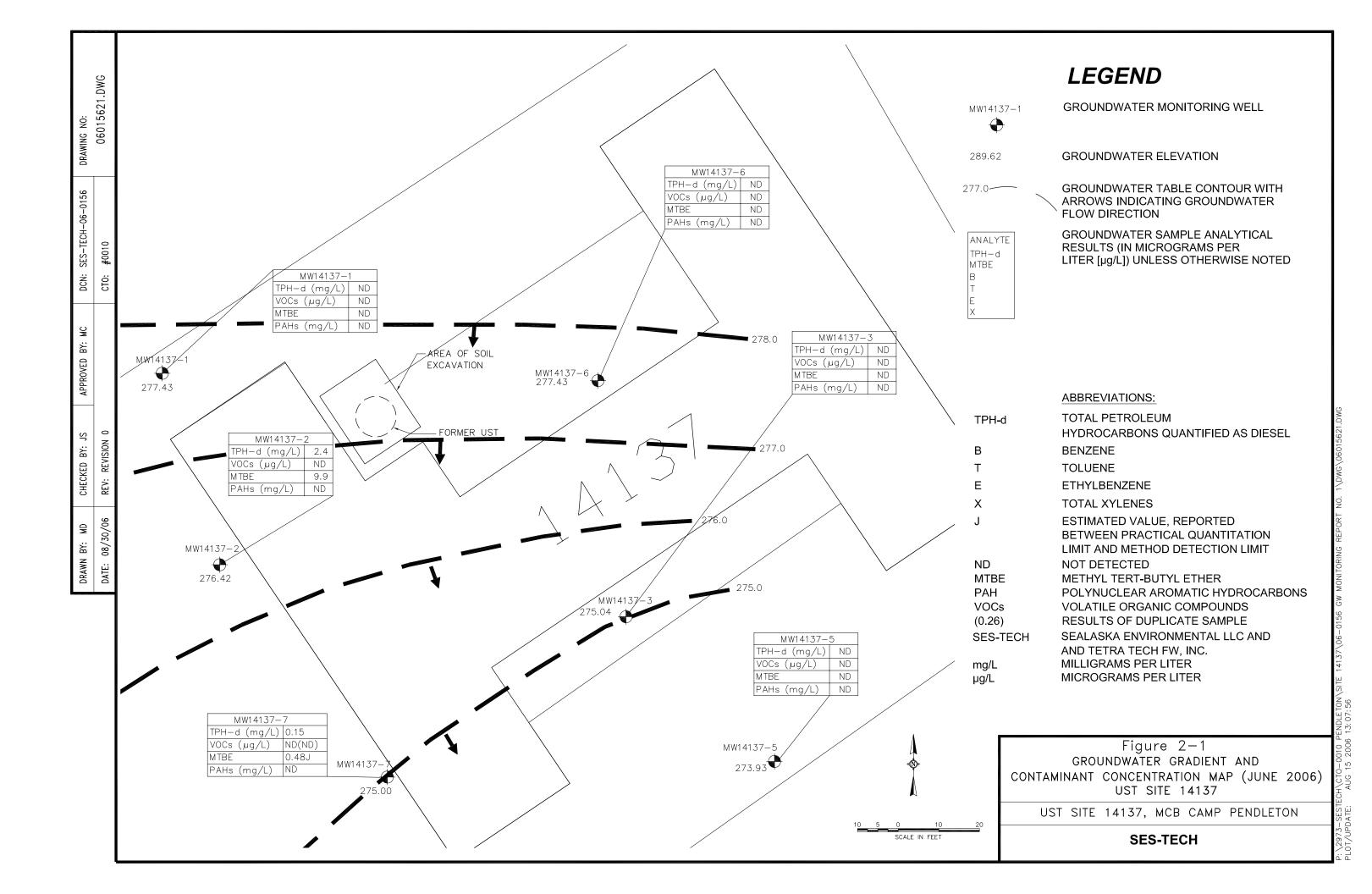
Dup - duplicate sample

FIGURES





P:\Z973-SESTECH\CTO-0010 PENDLETON\SITE 14137\Q6-0156 GW MONITORING REPORT\DWC\Q6015612.DWG PLOT/UPDATE: AUG 09 2006 12:49:49



APPENDIX A WELL SAMPLING LOGS

B900			
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FIE	LD WATER LEVE	L MEASUREMEN	TS
Date: 🕡	19106	Project Name: UST	Site 14137
Personnel: 14). B	nught, J. Sags	RLProject OFS: 297	3
Weather: Hot	Sunni Mean	urement Device: <u>Sdy</u> Comments	ret
	Depth to Water from	Depth to Sediment	
Well ID	Measuring Point (feet)	from Measuring Point	Comments
MW3	7.72	(feet) 25.30	
MWS	8.11	15.00	
MWV	17.46	14.18	
MW7	913	1495	
MWZ	9.60	24.65	
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	LO	W-FLOW	<u> PURG</u>	ING A	ND SAI	<u>MPLINC</u>	<u> DATA</u>	SHEE	
Proje	ct Name:	Camp Per	deter	1/413	₹ Wel	l Number:		MM	
		2973.0		7	•	quipment:	Horik	761 ()-22
	Date(27/06			S	ample ID:	10-1413	57-030	Time: 1015
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Reference	e: Top of C	asing	After	Total	Volume P	urged (mL):	24	100	
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Depth of \		(0)	24.85						
-	Top of Scre	en (ft)	20	-		System V	olume (mL)	= (2.4*H)+	·470
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Sample Pump Rate (60 min					470 mL = I	_	ume + Flowi		olume
	olume (mL)	493						
			Dissolved	T				Cum.	
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P-/		(dillilos)	(mg/L)	(0)	(1114)	(1410)	vvater (it)	(mL)	
WC1	-7 (6)	000	100		- 21	1, -7	- / 0	110	punyon
1966 1969	1.0	957	1.95	21.14	-26	16.7	7.68	1/80	Clear, 1700
7000	6.96	989	0.33	20.72	-34	30,7	1.7(960	(1
1002	6.95	1080	0.26	26.53	-40	28.8	7.88	1445	' (
1005	6.91	1240	010	20.64	-48	37.7	7.92 8.03	1920	()
1000	0, 10	1290	0.09	20,00	-46	55.2	פניוני	2430	Ch1/
105									collector
1013									COLECT SCILY
				1	7				
				X	\sim				· · · · · · · · · · · · · · · · · · ·
						ĺ			
Stability:	± 0.2 units	± 5-%	± 0.2 mg/L	±3%	± 20 mV	±10%			
Hach Fe ²⁺	<u> </u>	<u>.O</u>							٠
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Samples w	vere collect	ed directly from	n pump unl	ess otherv	vise noted.				a property of the second

Version and the second	A	A	***************************************	<u> </u>	,	4				
	LO	W-FLOW	/ PURC	ING A	ND SAP	MPLINC	3 DATA	SHEE		
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1		2973.0		<u> </u>	_	quipment:	:Horil	oa 1)-22	
	Date:	6/27/0			_		:10-141	37-034	Time: 1419	
Site En		us,	JB.		_ c	ontractor:	: 10-141		35 1424	
						· · · · · ·				
Reference	ce: Top of Ca	asing	Before	After	Total	Volume Pr	orged (mL):	18	<u>00</u>	
Depth to Water (ft) 8.05 8.5			834		494 = (2.4×10) +470					
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•	Pump Rate	,	1 16a f	lmin Imin	470 mL = F	-	lume + Flowt		olume	
1	Volume (mL)	.)	494	_	To the same state of			### = = :	J1611.10	
			Dissolved					Cum.		
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1355									pempon	
1358	7.00	1830	1.00	21.63	-93	9.7		300	Clary of	
1401	707	1830	6.81	21.57	1-94	80	8.30	600	<u> </u>	
1404	7.03	1810	6.70	2193	-95	10,4	8.32	900	((
	6.95	1	051	21.45	-95	12.1	3.42	10cm	• 4	
1410	6.95			21.42	-98	(0,0	8,48	1200	()	
1413	6.99	1880	0.38	1242	-103	10,3	8.54	1800	e t	
1416									Stable	
1419									Collectsan	
1424	<u> </u>								Collect Qu	
									0	
				201		$\overline{\Box}$				
					1	Z			,	
				<u> </u>						
Stability:	± 0.2 units	± 5_% ±	± 0.2 mg/L	±3%	± 20 mV	± 10 %				
Hach Fe ²⁺	<u> </u>	2 mg/L								
	_	<i>U</i> i								
Samples w	vere collecte	ed directly from	n pump unl	ess otherw	vise noted.					

SES-TECH

Page of

	LO	W-FLOW	/ PURC	ing a	ND SA	<u>MPLINO</u>	<u>3 DATA</u>	SHEE			
Proje	ect Name:	Camp 1	Ballet	411 CC	137 We	ll Number:		MW	3		
Project	t Number:	2973.			E	quipment:	Horiba	a 0-	22		
	Date:	<u>(0)</u>	1/06		_	Sample ID:	10-1413	37-032	-Time: \218		
Site En	gineer(s):	Jus'	JB		_ (Contractor:	Done	-			
Reference: Top of Casing Before After					Tota	l Volume P	urged (mL)	:	300		
Depth to Water (ft) 8.25 3.50						493= (10 ×2.4) + 470					
Depth to Water (ft) Depth of Well (ft) Depth to Top of Screen (ft) Screen Length (ft) Pump Depth (ft) Pump Rate Sample Pump Rate System Volume (mL) [8,25 3.50 23,30 24 20 20 210 210 210 210 210 210				System Volume (mL) = (2.4*H)+470 where 2.4mL/ft = tubing volume per foot (1/8" I.D.) H = length of tubing in feet 470 mL = Bladder volume + Flowthru cell volume							
Time	рН	Conductivity (umhos)	Dissolved Oxygen (mg/L)	Temp. (°C)	ORP (mv)	Turbidity (NTU)	Depth to Water (ft)	Cum. Volume (mL)	Comments		
<u>U57</u>									Dungor		
1,400	692	1500	0.87	20.59	-89	35,2	300	8,55	Moor Slight		
1203	6.88	1500	682	30'61	- එි	36,1	600	8.60	. (,		
1206	6.87	1530	0.71	ab51	<u>-88</u>	37.7	900	8.70	()		
1209	6,86	1550	0.68	20.8	-89	37.1		8.75	٠,		
1212	6.86	1580	0.63	DS:20	<i>-8</i> 8	37.5	1500	වූ පිර	٠,		
1215									Stable		
1218									ouled		
									Sando		
					7		\sim				
									 :		
Stability:	± 0.2 units	± 5_%	± 0.2 mg/L	±3%	± 20 mV	± 10 %	·				
Hach Fe ²⁺ _ Samples w		ed directly from	n pump unl	ess otherw	vise noted.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

SES-TECH

	LO	W-FLOW	<u> PURG</u>	ing <u>a</u>	ND SAP	MPLINC	<u> DATA</u>	SHEE			
Proje	ect Name:	Pamo 1	endlutor	1 /14/2	∑ Well	Number:		MWS			
Projec	t Number:	2973.	OLDO	•	_ E(quipment:	Hori	oa U	-22		
	Date:	6/27/0	<u>(</u>		S	ample ID:	10-1413	37-031	Time: 2.2		
Site En	gineer(s):	lib.	JV2				Done				
Referenc	e: Top of C	asing	Before	After	Total	Total Volume Purged (mL): 2520					
Depth to	Water (ft)		8.24	8.75		494-	=C(O.	2517-	+470,		
Depth of Well (ft) 15						(, ,					
H	Depth to Top of Screen (ft)					System V	olume (mL)	= (2.4*H)+	·470		
Screen Length (ft) (O					2 4ml /ft -	where					
Pump Rate 140					2.4mL/ft = tubing volume per foot (1/8" I.D.) H = length of tubing in feet						
8 '	Pump Rate		140	- -	H = length of tubing in feet 470 mL = Bladder volume + Flowthru cell volume						
System V	olume (mL)	-								
Time	pН	Conductivity	Dissolved Oxygen	remp.	ORP	Turbidity	Depth to	Cum. Volume	Comments		
	P''	(umhos)	(mg/L)	(°C)	(mv)	(NTU)	Water (ft)	(mL)	Comments		
1058				00 . 1				ha bigarra a hara ya penda anta anta anta	Dempon		
1101	7.15	2000	2.30	20.14		15.9	836		Clas noco		
1107	7.14	2100	1.84	20.12	<u> </u>	14.1	8.49	840	17		
110	7.13	250	1.67	20.12		15.0	8.50	1260	1		
$\frac{110}{110}$	7.13	2160	1.60	20.13	<u>-/</u>	15.1	8.63	1680	, v		
1117	7.14	2170		20.13	-12,	15.6	8.70	2100			
1116	7.16	2170	1.48	20.CX		(0.0)	8.75	2520	11		
1119									stuble		
1122									Certer-		
									sample		
				0							
					$\leq a$	-			·		
					-73		`				
Stability:	± 0.2 units	± 5 ⁻ %	± 0.2 mg/Ц	±3%	± 20 mV	± 10 %	}				
•	<u></u>										
Samples v	vere collect	ed directly fror	m pump unl	ess otherv	vise noted.						

	LO	W-FLOW	/ PURG	ING A	ND SAI	MPLINC	S DATA	SHEE	T		
Proje	ct Name:	Camp G	and letz	on /141	37 Wel	l Number:		1006	!		
Project	Number:	2973. (901C		E	quipment:	Horik	∞ ()-22		
	Date:	6/27/0	حاد		S	ample ID:	10-1413	71-029	Time: 0921		
Site Eng	gineer(s):	<u>ug</u>	NB		C	Contractor:	On	<u>م</u>			
		7			- 1						
Reference	e: Top of Ca	asing	Before	After	Total	Volume P	urged (mL):		<u>3000</u>		
Depth to \			7.8	17.96	<u> </u>	494	-(2.4	x10)1	+ 470		
Depth of Well (ft) 14.18 Depth to Top of Screen (ft) 5						System V	olume (ml.)	= (2 4 *H\+	-470		
B -	Screen Length (ft)					System Volume (mL) = (2.4*H)+470 where					
Pump De			10	-	wnere 2.4mL/ft = tubing volume per foot (1/8" I.D.)						
Pump Rat	te		120m	ymin		_	of tubing in				
B .	ump Rate		120mi	<i>jmin</i>	470 mL = 1	Bladder vol	ume + Flow	thru cell vo	olume		
System V	olume (mL))	<u> </u>	-			· · · · · · · · · · · · · · · · · · ·				
		Conductivity	Dissolved	Temp.	ORP	Turbidity	Depth to	Cum.			
Time	pН	(umhos)	Oxygen	(°C)	(mv)	(NTU)	Water (ft)	Volume	Comments		
1791 50			(mg/L)	(- /				(mL)	5		
1903	7.40	1650	1.80	2007	52	217	7.87	2/20	Dunper Haer, 100		
10000	7.37	1630	1.53	2024	48	20.0	7.87	f	11		
0909	7.34	1630	1.S2	20.24	45	32.S	7.90	720 1080	11		
2012	7.32	1630	1.55	20.10		297	7.93	1440	11		
MIS	7.31	1630	1.50	2010	42	30.0	7.96	1800	11		
(7918)							1.10		etable		
7921									odkat		
			1						Sample		
					$\langle \cdot \rangle$				angeo		
					- (
Stability:	± 0.2 units	± 5 %	± 0.2 mg/L	±3%	± 20 mV	± 10 %			\rightarrow		
							<u> </u>				
Hach Fe ²⁺	<i>(</i>).	9							•		
		······································									
Samples w	ere collecte	ed directly from	m pump uni	less otherv	vise noted						
		,									

SES-TECH

				منائب سيجانب ويستعيناك	Andrew 1981			***************************************	
	LO'	W-FLOW	<u>/ PURG</u>	ING A	ND SAP	<u> </u>	3 DATA	SHEE	
Proje	ect Name:	Camo	Pendle	ton	Well	l Number:	1	1W7	
_	t Number:				E(quipment:	Horil	oa O	-22
	Date:		00		S	ample ID:	10-1413	7-08-3	Time: 13/7
Site En	gineer(s):	us	JB.		C	Contractor:	Dona	2_	
·					T	***************************************	——————————————————————————————————————		
Reference	e: Top of Ca	asing	Before	After	Total	Volume Po	urged (mL):	18	300
Depth to	, ,	ļ	8.20			494	= C2.4	YO)-	+470
Depth of	• •	/ns	1491				_		•
Depth to Screen Le	Top of Scre	en (π)	10	- !		System vi	olume (mL) where	= (2.4°H)+	470
Pump De			10	- 1	2.4mL/ft =	tubina volu	me per foot	(1/8" I.D.)	
Pump Ra			100 ml	-lmin	Ant Tittem	_	n of tubing in		
	Pump Rate		100 m	LImin	470 mL = F	_	ume + Flowt		lume
1 -	/olume (mL)	· ·	494	<u> </u>					
			Dissolved			Ī,		Cum.	
Time	pН	Conductivity	Oxygen	i lemp. I	ORP (my)	Turbidity (NTU)	•	Volume	Comments
		(umhos)	(mg/l _k)	6127/01	(mv)	(NIU)	Water (ft)	(mL)	
1253			229			<u> </u>			Cumpon
1250	7.23	1530 -	22.02	22,02	5	6.8	8.SD	300	Moor
1259	7.18	550	21:86	21.86	12	7./_	B.55	650	1 1
1302	7.13	1540	1.18	21.72	12	7.2	8.60	900	()
1305	7.09	1530	5.73	2163	1 1/2	1	870	1200	(1
1308	7.07	1530	096	21.50	25	9.2	8.73	1500	۲,
13/1	7.07	1510	0.99	21.56	25	8.9	879	1800	4
134									stable
1317									adport
									Somple
									· · · · · · · · · · · · · · · · · · ·
			1						
			<i>-</i>						
Stability:	± 0.2 units	± 5-%	± 0.2 mg/L	±3%	± 20 mV	± 10 %			
· · · · · · · · · · · · · · · · · · ·	20.10.10.10.10.10.10.10.10.10.10.10.10.10	<u> </u>			 		ms/msi	`	
Hach Fe ²⁺	0.	0			1110000	x772	,, 3 111-1		
• • • • • • • •									
Samples v	vore collect	ted directly fror	m numn un'	lees other	vice noted				
oampies v	Vere concou	su unechy nor	II pump um	622 Office A	VISE HUIGU.				

APPENDIX B NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE MANIFEST

Ple	se print or type (Form designed for use on elite (12 pitch) typewriter)					
	NON-HAZARDOUS 1. Generator's US EPA ID No. WASTE MANIFEST C A 2 1	70023533	-	Manifest Document No.	63002	2. Page 1 of 1
	3 Generator's Name and Mailing Address AC/5 Environmental Security					
	P.O. Box 555008 Camp Fendleton, CA 92055-5008					
	4 Generator's Phone (760-7725-4321 Attn: Nate De	alaston				
100	5. Transporter 1 Company Name 6. General Environmental Mgmt Inc. C	US EPA ID Number		A. State Transp		
	7. Transporter 2 Company Name 8.	A D 9 8 3 6 4 9 I	ט ק פ	B. Transporter C. State Transp		26-1011
	, , , , , , , , , , , , , , , , , , , ,	OO EI HIO HUMBEI		D. Transporter		
	9. Designated Facility Name and Site Address 10. U.S. Ecology Corp.	US EPA ID Number		E. State Facility	's ID	
	Highway 95 12 miles south of Beatt	-	Ì	F. Facility's Pho		
	Beatty, NV 99003 N	V T 3 3 0 0 1 0 (اـــــــــــــــــــــــــــــــــــــ		800 2	39 3943
	11. WASTE DESCRIPTION		12. Cor	Type	13. Total Quantity	14. Unit Wt./Vol.
	a.			.,,,,,	00 440	7
	Non hazardous liquid (Well Water)		000	рм	00495	- G
G E N	b.	***************************************			11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-
N						
E R	C.					
A						
O R	d.					
	G. Additional Descriptions for Materials Listed Above			H. Handling Cod	des for Wastes Listed Above	
	,					
	15. Special Handling Instructions and Additional Information Einer gency Phone: (B00) 326-1011 (CEM		i			
	site: US Marine Corps-Camp Penleton-B. Berm Equip. Decon water,		nt Chi	ef,Camp	Pendleton, C	A 92055
	16144, 2389, 14121, 14131 (14137)4	ユレムフ		- 1 A	-1111647	
		JMJMJ			164947	1
	16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipm in proper condition for transport. The materials described on this manifest are not	ent are fully and accurately described a subject to jederal hazardous waste reg	and are in al		/>	11211
	Werdy Brugant	_ ((Qe)	-	7	EEC 1 107	0ate
	Printed Typed Nime	Signature		37	Month	Day Year
Ī	17. Transporter 1 Acknowledgement of Receipt of Materials 3/05	I May all	1	<u> </u>		Z = Z = (
TRANSPORTER	Printed/Typed Name	Signature			Month	Date Day Year
S	Hady Negrote	The Man	new e	7 -	07	13 08
Ř.	18. *ransporter 2 Acknowledgement of freceipt of Materials Printed/Typed Name	Signature	<i>-</i>	<u></u>		Date
Ë	·)			Month	Day Year
F	19. Discrepancy Indication Space					
A						^
L	20. Facility Owner or Operator, Certification of receipt of the waste materials covered by	y this manifest, except as noted in item	19.			
T	Printed/Typed Name	Signature				Date
Ÿ		Signature			Manih 	Day Year
		<u> </u>				

APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS



TABLE OF CONTENTS

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

SDG:

06F281

SECTION		PAGE
Cover Letter, CO	OC/Sample Receipt Form	1000 – 1004
GC/MS-VOA	METHOD 5030B/8260B	2000 – 2135
GC/MS-SVOA	METHOD 3520C/8270C SIM	3000 – 3106
GC-VOA	**	4000 –
GC-SVOA	METHOD 3520C/8015B	5000 – 5051
HPLC	**	6000
METALS	**	7000
WET	METHOD 300.0	8000 – 8066
OTHERS	**	9000

^{** -} Not Requested



Torrance, CA 90501 Tel: (310) 618-8889 Fax: (310) 618-0818

Date: 07-19-2006 EMAX Batch No.: 06F281

Attn: Nick Weinberger

SES-TECH

1940 E. Deere Avenue, Suite 200

Santa Ana CA 92705

Subject: Laboratory Report
Project: Camp Pendleton, UST Site 14137

Enclosed is the Laboratory report for samples received on 06/27/06. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
10-14137-028 10-14137-029	F281-01 F281-02	06/27/06 06/27/06	WATER WATER	VOLATILE ORGANICS BY GC/MS VOLATILE ORGANICS BY GC/MS TPH DIESEL SEMIVOLATILE ORGANICS SIM ANIONS BY IC
10-14137-030	F281-0 3	06/27/06	WATER	VOLATILE ORGANICS BY GC/MS TPH DIESEL SEMIVOLATILE ORGANICS SIM
10-14137-031	F281-04	06/27/06	WATER	ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL SEMIVOLATILE ORGANICS SIM
10-14137-032	F281-05	06/27/06	WATER	ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL SEMIVOLATILE ORGANICS SIM
10-14137-033	F281-06	06/27/06	WATER	ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL

1230 Columbia Street, Suite 500
Sun Diego, CA 92101 (619) 234-8696

CHAIN-OF-CUSTODY RECORD

(nponeer visite						-					
rosec iname		PURCHASE ORDER NO	R NO			ANALYS	ANALYSES REQUIRED	LABORATORY NAME			
Jamo Jonaston	ひい		150						Project Information	mation	
PROJECT LOCATION		PROJECT NO.				5 5 8 8	· 	くよう	Section		
下いよ 113		2973	3 (2)00	S		0 0 0 0 0 0 0			Do not submit to	nit to	
SAMPLER NAME		AIRBILL NUMBER	1			78 170 170		LABORATORY ID	Laboratory	2	
Whole bruge	ict	Coursey	7			18 18 18 18		(FOR LABORATORY)		7	
PROJECT CONTACT (100	PROJECT CONTAC	T PHONE NUN	10 K		3 7					
			ı		-	が 十 つ ら					L
SAMPLE ID	OULECTED	TIME	NO. OF CONTAINER	LEVEL 3 4	. ¥ - ⊤	と写る音楽		COMMENTS	LOCATION	DEPTH START END	8
10-14151-028	058/70121P	930	W.	<u>.</u> 	0 0 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3				TRIPBANK		4
D-14137-029	1707 July 1737	1207	Q	イ	<u>2</u> €	ナイナメ		100000 TO 100000 TO 10000 TO 1	-)(nW- 12H)	/	0
0-121-030	25-152 N.R.	<u> </u>	2	7	35	XXXX			1 J.M. (3.12)	/	
7	1221 July 22	122		\ \	Ĵ 3 S	メメイ			アンガーなら		DO T
1 2	, Wrzie	12.18	0	×	55	メイグ			[47] - Hais		
10-14137-033	12716 BI	<u>M</u>	<u>S</u>	3	3 5 5	メメソメ		Includos MSMSD	エジオーに記		02
P141201-034 B221101-01	GZJIQ	51-111	9	¥	101 W	ナメイプ			14137 - MWZ	1	69
10-14137-035 WILL 1974	JOINTON	1475	9	7	25	オ メナメ			14137-HWZ		80
10-14137-030	403 20129	1500h	9	3 X	170 (10)	$ / \rangle \times$			Fair Ping	/	Z
	ĺ. l.	1	- Pro- market by the property of the pro-		*		立ちら	(a/371.00			
RELINGUISHED BY (Signature)	PATE TIVE	RECEIVED BY (Signature)	nature)		ABORATO	LABORATORY INSTRUCTIONS/COMMENTS	S/COMMENTS	The state of the s	SAMPLING COMMENT:	<u>.</u>	
	まった。	COMPANY	XYZ								
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature	maturé)	0_	OMPOSIT	COMPOSITE DESCRIPTION					
COMPANY	TIME	COMPANY									
RELINQUISHED BY (Signature)	DATE	RECEIVED BY (Signature)	(bature)	S	SAMPLE COND	ONDITION UPON 1	SAMPLE CONDITION UPON RECEIPT (FOR LABORATORY) THAPFRATIRE: SAMPLE CONDITION: INT	ATORY)			
COMPANY	TIME	COMPANY			COOLER SEAL:		D INTACT D BROKEN				

White - Laboratory; Pink - Laboratory; Canary - Project File; Manila - Data Management

Sample ID	Control #	Col Date	Matrix	Analysis
10-14137-034	F2 8 1-07	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL
10-14137-035	F2 81 -0 8	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL
10-14137-036	F2 81 -0 9	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL
10-14137-033MS	F281-06M	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM VOLATILE ORGANICS BY GC/MS TPH DIESEL
10-14137-033MSD	F281-06S	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM ANIONS BY IC VOLATILE ORGANICS BY GC/MS TPH DIESEL
10-14137-033pup	F281-06D	06/27/06	WATER	SEMIVOLATILE ORGANICS SIM ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D. Laboratory Director



SAMPLE RECEIPT FORM 1

Type	of Delivery	Dolinged D. (A)	L 11		20(+24:
EMAX Courier	or Delivery	Delivered By/Air	DIII	ECN	06F281
Client Delivery				Recepient	LUMA
Third Party				Date	062706
[] marary				Time	<u>nıs</u>
		COC Inspection			
Client Name		Sampler Name		Sampling Da	ate/Time/Location
Address		Courier Signature/Date/Time	•		
Client PM/FC		☐ TAT		Analysis Red	quired
Tel #/Fax #		Sample ID		_	416
Safety Issues	None	High Concentrations expected		Preservative	
Comments:	Rad Screening Requi			Superfund S	ite Samples
		Packaging Inspecti	on		
Container	Cooler	☐ Box		[-	1
Condition	Custody Seal		☐ Damag	ed [ן ר
	Bubble Pack	Styrofoam	Sufficie		-P6
Temperatures /	Cooler 1 3 5	✓ Cooler 2 <u>3 / 6</u>	Cooler 3	· <u> </u>	Cooler 4
	Cooler 5	Cooler 6			Cooler 8
	Cooler 9	Cooler 10	Cooler 1	·	Cooler 12
Comments:				·	J Cooler 12
LOCID					•
LSCID	Client ID	Discrepancy		Cor	rective Action
		W			
		A	602706		
SCID 1-2-C 1					
	Container ID				
REVIEWS	1 0		7		\mathcal{L}
Sample Labeling_	M	SRE	Y	PM	1900 -
Date_	002706	Date 6	27/06	Date	6/28/4

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	. F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
В	В	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit .
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.



LABORATORY REPORT FOR

SES-TECH

CAMP PENDLETON, UST SITE 14137

METHOD 5030B/8260B VOLATILE ORGANICS BY GC/MS

SDG#: 06F281

CASE NARRATIVE

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

SDG:

06F281

METHOD 5030B/8260B VOLATILE ORGANICS BY GC/MS

Nine (9) water samples were received on 06/27/06 for Volatile Organic analysis by Method 5030B/8260B in accordance with USEPA SW846, 3rd edition.

1. Holding Time

Analytical holding time was met.

2. Tuning and Calibration

Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

Method blanks were free of contamination at half of the reporting limit.

4. Surrogate Recovery

Recoveries were within QC limits.

5. Lab Control Sample/Lab Control Sample Duplicate

All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

Sample F281-06R was spiked. All recoveries were within QC limit.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All requirements were met.

) (Instrument ID	: T-094
	 		# # # # # # # # # # # # # # # # # # #	## 	LAATER					
Client		Laboratory	Dilution	ж	Analysis	Extraction	Sample	Calibration Prep.	n Prep.	
Sample ID		Sample 1D	Factor	Moist	DateTime	DateTime	Data FN	Data FW	Batch	Notes
; ; ; ; ; ;		1 1 1 1 1 1 1	† † † †	1	* * * * * * * * * * * * * * * * * * * *	***************************************		1 1 1 1 1 1	, , , , , , , , , , , , , , , , , , , ,	************
MBLK TW		V094F51a	-	¥	06/29/0616:53	06/29/0616:53	RFD556	RFD135	V094F51	Method Blank
CSTW	1,000	V094F51L	,	≨	06/29/0614:56	06/29/0614:56	RFD553	RFD135	V094F51	Lab Control Sample (LCS)
*L03		V094F51C	-	¥	06/29/0615:35	06/29/0615:35	RFD554	RFD135	V094F51	LCS Duplicate
-14137-028		F281-01	,-	¥	06/29/0617:32	06/29/0617:32	RFD557	RFD135	V094F51	Field Sample
-14137-029		F281-02	-	¥	06/29/0618:11	06/29/0618:11	RFD558	RFD135	V094F51	Field Sample
-14137-030		F281-03	-	NA NA	06/29/0618:50	06/29/0618:50	RFD559	RFD135	V094F51	Field Sample
-14137-031		F281-04	-	¥	06/29/0619:29	06/29/0619:29	RFD560	RFD135	V094F51	Field Sample
-14137-032		F281-05	-	X.	06/29/0620:08	06/29/0620:08	RFD561	RFD135	V094F51	Field Sample
10-14137-034		F281-07	-	Ä	06/29/0620:47	06/29/0620:47	RFD562	RFD135	V094F51	Field Sample
-14137-035		F281-08	-	ΑN	06/29/0621:26	06/29/0621:26	RFD563	RFD135	V094F51	Field Sample
-14137-036		F281-09	-	NA NA	06/29/0622:05	06/29/0622:05	RFD564	RFD135	V094F51	Field Sample
-14137-053MS		F281-06M	,	¥.	06/30/0600:03	06/30/0600:03	RFD567	RFD135	V094F51	Matrix Spike Sample (MS
-14157-033MSD		£281-06S		¥	06/30/0600:43	06/30/0600:43	RFD568	RFD135	V094F51	MS Duplicate (MSD)
#BLK2W		V094603a	-	Ä	07/07/0617:54	07/07/0617:54	RGD019	RFD135	V094603	Method Blank
-CS2#		V094G03L	-	*	07/07/0615:58	07/07/0615:58	RGD016	RFD135	V094603	Lab Control Sample (LCS)
M203.		V094603C	•	¥	07/07/0616:37	07/07/0616:37	RGD017	RFD135	V094G03	LCS Duplicate
10-14137-033		F281-04D	•	***	07/07/06/40	11.02.502.502.50	40000		100000	

FN - Filename % Moist - Percent Moisture

SAMPLE RESULTS

Date Collected: 06/27/06
Date Received: 06/27/06
Date Extracted: 06/29/06 17:32 Client : SES-TECH : CAMP PENDLETON, UST SITE 14137 Project Project : CAMP PENDLETO Patch No. : 06F281 pole ID: 10-14137-028 Samp ID: F281-01 Lab File ID: RFD557 Ext Btch ID: V094F51 Date Analyzed: 06/29/06 17:32 Dilution Factor: 1 : WATER Matrix % Moisture : NA Instrument ID : T-094 Calib. Ref.: RFD135

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.2
1,1,2,2-TETRACHLOROETHANE	ND	ī	.2
1,1,2-TRICHLOROETHANE	ND		
1,1-DICHLOROETHANE	ND	5	.2
1,1-DICHLOROETHENE	ND	5	.2
1,2-DICHLOROETHANE	ND	5 5 .5	.2
1,2-DICHLOROPROPANE	ND	5	.Ž
METHYL ETHYL KETONE	ND	50	.2 .2 .2 .2 .2 .5 5 5 .2
2-ĤEXANONE	ND	50	5
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	ND	50	5
BENZENE	ND	.5	.2
BROMODICHLOROMETHANE	. ND	5 5	.2
BROMOFORM	ND	5	.3
BROMOMETHANE	GN	5	.2
CARBON TETRACHLORIDE	ND	.5	.2
CHLOROBENZENE	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	.2
CHLOROETHANE	ND	5	.2 .2
CHLOROFORM	ND	5	.2
CHLOROMETHANE	ND	5	.2
CIS-1,2-DICHLOROETHENE	ND	5	.2
CIS-1,3-DICHLOROPROPENE	ND	5	.2
DIBROMOCHLOROMETHANE	ИD	5	.2
ETHYLBENZENE	ND	.5	.2
XYLENES	ND	5	.2 .2
BE	ЙĎ	<u>1</u>	.2
HYLENE CHLORIDE	ND	5	.5
TYRENE	ND	5	.2
TETRACHLOROETHYLENE	ND	5 5 5 .5	.2 .2 .2
TOLUENE	ND	.5	.2
TRANS-1,2-DICHLOROETHENE	ND	5	.2
TRANS-1_3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	. 5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	.2 .2 .5 .2 .2 .2 .2
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER	ND	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	65 - 135
TOLUENE-D8	100	75 - 125
8ROMOFLUOROBENZENE	107	75 - 125

R.L.: Reporting limit

: Out of QC

: Exceeded calibration range : Found in associated method blank : Value between R.L. and MDL

: Value from dilution analysis

Date Collected: 06/27/06
Date Received: 06/27/06
Date Extracted: 06/29/06 18:11 : SES-TECH Client Project : CAMP PENDLETON, UST SITE 14137

Booch No. : 06F281

e ID: 10-14137-029

samp ID: F281-02 Date Analyzed: 06/29/06 18:11 Dilution Factor: 1 : WATER Lab File ID: RFD558 Matrix Ext 8tch ID: V094F51 : NA % Moisture

Instrument ID : T-094 Calib. Ref.: RFD135

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
4.4.4	ND.	E	2
1,1,1-TRICHLOROETHANE	ND	1	.2 .2
1,1,2,2-TETRACHLOROETHANE	ND	5	
1,1,2-TRICHLOROETHANE	ND	j	.22.22.25.55.22.3
1,1-DICHLOROETHANE	ND		٠
1,1-DICHLOROETHENE	ND	5 5 .5	.2
1,2-DICHLOROETHANE	ND	.5 5	
1,2-DICHLOROPROPANE	ND		٠,٢
METHYL ETHYL KETONE	ND	50	۶.
2-HEXANONE	ND	50	2
4-METHYL-2-PENTANONE (MIBK)	ND	50	2
ACETONE	ДN	50	ַלַ
BENZENE	ND	.5	.2
BROMODICHLOROMETHANE	ND	5	.2
BROMOFORM	ND	5	.3
BROMOMETHANE	ND	5	.2
CARBON TETRACHLORIDE	ND	5 5 5 .5	.2
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5 5 5 5 5 5 5 5 5 5	.2
CHLOROFORM	ИD	5	.2
CHLOROMETHANE	ND	5	.2
CIS-1,2-DICHLOROETHENE	ND	5	.2
CIS-1,3-DICHLOROPROPENE	ND	5	.2
DIBROMOCHLOROMETHANE	ND	5	.2
ETHYLBENZENE	ND	.5	.2
XYLENES	ND	5	.2
7,100	ND	1	.2
YLENE CHLORIDE	ND	5	.5
STRENE	ND	5	.2
TETRACHLOROETHYLENE	DM	5	.2
TOLUENE	ND	5 5 5 .5	.2
TRANS-1,2-DICHLOROETHENE	ND	.5 .5	.2
FRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.2
	ND	ź	
ETHYL TERT-BUTYL ETHER	ND	5	.2 .2
TERT-AMYL METHYL ETHER	NU	•	
CURROCATE DADAMETERS	% RECOVERY	OC LIMIT	

SURROGATE PARAMETERS	% RECOVERY	MC LIMIT

1.2-DICHLOROETHANE-D4	105	65-135
TOLUENE-D8	107	75 - 125
BROMOFLUOROBENZENE	116	75-125

R.L.: Reporting limit
* : Out of OC

Out of QC

Exceeded calibration range : Found in associated method blank Value between R.L. and MDL

: Value from dilution analysis

: SES-TECH Project : SES-TECH
Project : CAMP PENDLETON, UST SITE 14137
Ratch No. : 06F281
| Die ID: 10-14137-030
| Samp ID: F281-03
| Lab File ID: RFD559
Ext Brob ID: V0006554 Client Date Collected: 06/27/06 Date Received: 06/27/06
Date Extracted: 06/29/06 18:50
Date Analyzed: 06/29/06 18:50 Dilution Factor: 1 : WATER Matrix Ext 8tch ID: V094F51 % Moisture : NA Instrument ID : T-094 Calib. Ref.: RFD135

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)
1,1,1-TRICHLOROETHANE	ИÐ	5	.2
1,1,2,2-TETRACHLOROETHANE	ND	1	.2
1,1,2-TRICHLOROETHANE	ND	5 5 5 .5	.2
1,1-DICHLOROETHANE	ND	5	.2
1,1-DICHLOROETHENE	ON	5	.2
1,2-DICHLOROETHANE	סא	.5	.2
1,2-DICHLOROPROPANE	ND	5	.2
METHYL ETHYL KETONE	ND	50	.2
2-HEXANONE	В	50	5 5 5 .2
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	ND	50	5
BENZENE	ND	.5	.2
BROMODICHLOROMETHANE	ND	5	.2
BROMOFORM	ND	5	.3
BROMOMETHANE	ND	5	.2
CARBON TETRACHLORIDE	ND	.5	.2
CHLOROBENZENE	ND	555555555551	.2
CHLOROETHANE	ND	5	.2 .2 .2
CHLOROFORM	ND	5	.2
CHLOROMETHANE	ND	5	.2
CIS-1,2-DICHLOROETHENE	ND	5	.2
CIS-1,3-DICHLOROPROPENE	ND ND	. 5	.2 .2 .2 .2
DIBROMOCHLOROMETHANE	ND	5	.2
ETHYLBENZENE	ND	5	.2
XYLENES	ND	5	.2
THE CONTRACTOR OF THE CONTRACT	ND		.2
HYLENE CHLORIDE	ND	5	-5
TRENE	ND	5	.2
TETRACHLOROETHYLENE	ND	5 5 .5 .5	.2
TOLUENE	מא	.5	.2
TRANS-1,2-DICHLOROETHENE	ND	5	.2
TRANS-1,3-DICHLOROPROPENE	DN	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER	МD	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1.2-DICHLOROETHANE-D4	101	65 - 135
TOLUENE-D8	100	75 - 125
BROMOFLUOROBENZENE	106	75 - 125

R.L.: Reporting limit

: Out of QC

: Exceeded calibration range : Found in associated method blank E : Value between R.L. and MDL D : Value from dilution analysis
D.O. : Diluted out

Date Collected: 06/27/06
Date Received: 06/27/06
Date Extracted: 06/29/06 19:29
Date Analyzed: 06/29/06 19:29 Client : SES-TECH oject : CAMP PENDLETON, UST SITE 14137

No. : 06F281

ID: 10-14137-031

amp ID: F281-04 Project Dilution Factor: 1 : WATER : NA Matrix Lab File ID: RFD560 Ext 8tch ID: V094F51 Calib. Ref.: RFD135 % Moisture Instrument ID : T-094

1, 1-TRICHLOROETHANE	PARAMETERS .	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,2,2-TETRACHLOROETHANE 1,1,2,2-TETRACHLOROETHANE ND 5 2 1,1-0-ICHLOROETHANE ND 5 2 1,1-1-ICHLOROETHANE ND 5 2 1,1-1-ICHLOROETHANE ND 5 2 1,2-DICHLOROETHANE ND 5 2 1,2-DICHLOROETHANE ND 5 2 1,2-DICHLOROPOPANE ND 5 2 METHYL ETHYL KETONE ND 50 2-HEXANONE ND 50 3-ENEXANONE ND 50 3-E	*****		5	.2
1,2-DICHLOROETHANE	1,1,1-TRICHLOROETHANE			.2
1,2-DICHLOROETHANE	1,1,2,2-TETRACHLORUETHANE			.2
1,2-DICHLOROETHANE	1,1,2-TRICHLORDETHANE		5	.2
1,2-DICHLOROETHANE	1,1-DICHLOROETHANE		5	.2
1,2-DICHLOROPROPANE 1,2-DICHLOROPROPANE METHYL ETHYL KETONE 2-HEXANONE ND 50 2-HEXANONE ND 50 3- 2-HEXANONE ND 50 3- 2-HEXANONE ND 50 3- 3- ACETONE ND 50 3- ACETONE ND 50 3- ACETONE ND 50 3- BENZENE ND 50 3- BROMODI CHLOROMETHANE ND 55 3- BROMOMETHANE ND 55 3- CHLOROBENZENE ND 55 3- CHLOROBENZENE ND 55 3- CHLOROFORM ND 55 3- CHLOROMETHANE ND 55 3- CHYLLEROLOROMETHANE ND 55 3- CHYLLEROLOROMETHANE ND 55 3- CHYLLEROLOROMETHANE ND 55 3- CHYLLEROLOROMETHANE ND 55 3- CHROMATE ND 55 3- CHROMAT			.5	.2
7,2-DICHLOROPADANE METHYL ETHYL KETONE 2-HEXANONE 4-METHYL-2-PENTANONE (MIBK) ND 50 5 4-METHYL-2-PENTANONE (MIBK) ND 50 5 4-METHYL-2-PENTANONE (MIBK) ND 50 5 8ENZENE ND 50 8ENZENE ND 5 8ROMODICHLOROMETHANE ND 5 8ROMOFORM ND 5 8ROMOMETHANE ND 5 4-METHYL CARBON TETRACHLORIDE ND 5 5 4-METHYL CARBON TETRACH ND 5			- 5	
ND SO S	1,2-DICHLOROPROPANE			.2
## A-METHYL-2-PENTANONE (MIBK) ND 50 5 ## ACETONE ND 50 5 ## ACE			50	5
ACETONE ND 50 5 BENZENE ND .5 .2 BROMODICHLOROMETHANE ND 5 .2 BROMOPORM ND 5 .2 BROMOMETHANE ND 5 .2 CARBON TETRACHLORIDE ND 5 .2 CHLOROBENZENE ND 5 .2 CHLOROFORM ND 5 .2 CHLOROFORM ND 5 .2 CHLOROFORM ND 5 .2 CHLOROFORM ND 5 .2 CHLOROMETHANE ND 5 .2 CHLOROMETHANE ND 5 .2 CIS-1,2-DICHLOROETHENE ND 5 .2 CIS-1,3-DICHLOROFOPENE ND 5 .2 ETHYLBENZENE ND 5 .2 XYLENES ND 5 .2 XYLENES ND 5 .2 YLENES ND 5 .2 TETRACHLOROETHYLENE ND 5 .2 TETRACHLOROETHENE ND 5 .2 TOLUENE ND 5 .2 TRANS-1,2-DICHLOROETHENE ND 5 .2 TRANS-1,3-DICHLOROETHENE ND 5 .2 TRANS-1,3-DICHLOROPROPENE ND 5 .2 TRANS-1,3-DICHLOROPROPENE ND 5 .2 TRICHLOROETHENE ND	Z-MEXANUNE		50	
BROMOFORM BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROBENZENE CHLOROGETHANE CHLOROFORM ND S CHLOROFORM ND S CHLOROMETHANE CHLOROMETHANE CIS-1,2-DICHLOROETHENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ND S CYLENES ND S TYRENE TOLUENE ND TOLUENE TETRACHLOROETHYLENE ND TOLUENE TRANS-1,2-DICHLOROPROPENE ND TRANS-1,2-DICHLOROETHENE ND TOLUENE TRANS-1,3-DICHLOROETHENE ND TOLUENE SURROGATE PARAMETERS TRECOVERY QC LIMIT TOLUENE-DB TOLUENE-DB TOLUENE-DB TOLUENE-DB		· · · ·	50	5
BROMOFORM BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROBENZENE CHLOROGETHANE CHLOROFORM ND S CHLOROFORM ND S CHLOROMETHANE CHLOROMETHANE CIS-1,2-DICHLOROETHENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ND S CYLENES ND S TYRENE TOLUENE ND TOLUENE TETRACHLOROETHYLENE ND TOLUENE TRANS-1,2-DICHLOROPROPENE ND TRANS-1,2-DICHLOROETHENE ND TOLUENE TRANS-1,3-DICHLOROETHENE ND TOLUENE SURROGATE PARAMETERS TRECOVERY QC LIMIT TOLUENE-DB TOLUENE-DB TOLUENE-DB TOLUENE-DB		• • •	.5	.2
BROMOFORM BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROBENZENE CHLOROGETHANE CHLOROFORM ND S CHLOROFORM ND S CHLOROMETHANE CHLOROMETHANE CIS-1,2-DICHLOROETHENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ND S CYLENES ND S TYRENE TOLUENE ND TOLUENE TETRACHLOROETHYLENE ND TOLUENE TRANS-1,2-DICHLOROPROPENE ND TRANS-1,2-DICHLOROETHENE ND TOLUENE TRANS-1,3-DICHLOROETHENE ND TOLUENE SURROGATE PARAMETERS TRECOVERY QC LIMIT TOLUENE-DB TOLUENE-DB TOLUENE-DB TOLUENE-DB	BENZENE BROUGH CHI OROMETHANE		5	.2
CARBON TETRACHLORIDE CARBON TETRACHLORIDE CHLOROBENZENE CIS-1,2-DICHLOROPROPENE DIBROMOCHLOROMETHANE DIBROMOCHLOROMETHANE ETHYLBENZENE XYLENES ND STYRENE TETRACHLOROETHYLENE TOLUENE TRANS-1,2-DICHLOROBENE ND TOLUENE TRANS-1,2-DICHLOROBENE ND TRANS-1,3-DICHLOROBENE ND TRANS-1,3-DICHLOROPROPENE ND TRANS-1,3-DICHLOROBENE ND TRANS-1,3-DICHLOROPROPENE ND TRANS-1,3-DICHLOROBENE ND TOLUENE ND TOLUENE ND TOLUENE ND TOLUENE SURROGATE PARAMETERS TRECOVERY QC LIMIT 1,2-DICHLOROBETHANE-D4 TOLUENE-D8 TOLUENE			5	.3
CARBON TETRACHLORIDE CARBON TETRACHLORIDE CHLOROBENZENE CHLOROFORM ND S CHLOROMETHANE CHLOROMETHANE CHLOROMETHANE CIS-1,2-DICHLOROFOPENE DIBROMOCHLOROMETHANE ETHYLBENZENE XYLENES ND S YVENES ND S YVENE TETRACHLOROETHYLENE TOLUENE TRANS-1,2-DICHLOROFROPENE ND TOLUENE TRANS-1,3-DICHLOROFROPENE ND TOLUENE TERT-AMYL METHYL ETHER ND TOLUENE TOLUENE-OB ND TOLUENE-OB TOLUENE-OB ND TOLUENE-OB T			5	.2
YLLENE CHLORIDE	CARRON TETRACULORIDE	ND	.5	.2
YLLENE CHLORIDE		ND	5	.2
YLLENE CHLORIDE		ND	5	.2
YLLENE CHLORIDE		ND	5	.2
YLLENE CHLORIDE		ND	5	.2
YLLENE CHLORIDE	CIS-1 2-DICHIOROFTHENE	ND	5	.2
YLLENE CHLORIDE	CIS-1 3-DICHLOROPROPENE	ЯÐ	5	.2
YLLENE CHLORIDE	D I BROMOCHI OROMETHANE	ND	5	.2
YLLENE CHLORIDE		ND	.5	.2
YLLENE CHLORIDE			5	٠,٢
AYLENE CHLORIDE			1	
ND 50 55 55 55 55 55 55 5			5	- 2
ND 50 55 55 55 55 55 55 5			5	.4
ND 50 55 55 55 55 55 55 5	TETRACHLOROETHYLENE		<u>ر</u>	٠.٤
ND 50 55 55 55 55 55 55 5	TOLUENE		.5	٠,6
ND 50 55 55 55 55 55 55 5	TRANS-1.2-DICHLOROETHENE		5	٠.٤
ND 50 55 55 55 55 55 55 5	TRANS-1.3-DICHLOROPROPENE		.2	. 2
VINYL ACETATE VINYL CHLORIDE VINYL C	TRICHLOROETHENE			٠. ٢
VINYL CHLORIDE TERT-BUTYL ALCOHOL DIISOPROPYL ETHER ETHYL TERT-BUTYL ETHER ND TERT-AMYL METHYL ETHER ND SURROGATE PARAMETERS NC TOLUENE-DB NC ND	VINYL ACETATE			ر.
TERT-AMYL METHYL ETHER ND 5 .2 SURROGATE PARAMETERS % RECOVERY QC LIMIT 1,2-DICHLOROETHANE-D4 99 65-135 TOLUENE-D8 99 75-125	VINYL CHLORIDE			
TERT-AMYL METHYL ETHER ND 5 .2 SURROGATE PARAMETERS % RECOVERY QC LIMIT 1,2-DICHLOROETHANE-D4 99 65-135 TOLUENE-D8 99 75-125	TERT-BUTYL ALCOHOL			5
TERT-AMYL METHYL ETHER ND 5 .2 SURROGATE PARAMETERS % RECOVERY QC LIMIT 1,2-DICHLOROETHANE-D4 99 65-135 TOLUENE-D8 99 75-125	DIISOPROPYL ETHER			.5
SURROGATE PARAMETERS % RECOVERY QC LIMIT 1,2-DICHLOROETHANE-D4 99 75-125 TOLUENE-D8 99 75-125	FTHYL TERT-BUTYL ETHER			. 5
1,2-DICHLOROETHANE-D4 99 75-125 TOLUENE-D8 100 75-125	TERT-AMYL METHYL ETHER	NU	,	
1,2-DICHLOROETHANE-D4 99 65-135 TOLUENE-D8 99 75-125	SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
TOLUENE-D8 10/ 75-125		99	65 - 135	
	1,2-DICHEOROETHARE DA	99		
		104	75 - 125	

R.L.: Reporting Limit
* : Out of OC : Out of QC

BROMOFLUOROBENZENE F

: Exceeded calibration range Ε : Found in associated method blank : Value between R.L. and MDL

: Value from dilution analysis

Client : SES-TECH Date Collected: 06/27/06
Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06
Batch No. : 06F281 Date Extracted: 06/29/06 20:08
Date Analyzed: 06/29/06 20:08
Date Analyzed: 06/29/06 20:08
Dilution Factor: 1
Lab File ID: RFD561 Matrix : WATER
Ext Btch ID: V094F51 % Moisture : NA
Calib. Ref.: RFD135 Instrument ID : T-094

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	ε	
1,1,2,2-TETRACHLOROETHANE	ND ND	1	.2 .2
1,1,2-TRICHLOROETHANE	ND		.2
1,1-DICHLOROETHANE	ND	5 5	.2
1,1-DICHLOROETHENE	ND	ź	.2
1,2-DICHLOROETHANE	ND	.5	.2
1,2-DICHLOROPROPANE	ND	.5	.2
METHYL ETHYL KETONE	ND	5 0	.2
2-HEXANONE	ND	50	
4-METHYL-2-PENTANONE (M1BK)	ND	50	ź
ACETONE	ND	50	Ś
BENZENE	ND	.5	5 5 .2 .2
BROMOD I CHLOROMETHANE	ND		.5
BROMOFORM	ND	5	.3
BROMOMETHANE	ND	5	2
CARBON TETRACHLORIDE	ND	-5	.2
CHLOROBENZENE	ND	` <u>5</u>	.2
CHLOROETHANE	ND	5 5 5 5 5 5 5 5	.2
CHLOROFORM	ND	, <u>5</u>	.2
CHLOROMETHANE	ND	5	.2
CIS-1,2-DICHLOROETHENE	ND	.5	.2 .2
CIS-1,3-DICHLOROPROPENE	ND	. 5	.2
DIBROMOCHLOROMETHANE	ND	5	.2
ETHYLBENZENE	ND	.5	.2
XYLENES	. ND	, 5 1	.2
· · · · · · · · · · · · · · · · · · ·	ND	1	.2
HYLENE CHLORIDE	ND	5 5 5 .5	.2 .2 .5
: YRENE	ND	5	.2
TETRACHLOROETHYLENE	ND	5	.2
TOLUENE	ND	.5	.2
TRANS-1,2-DICHLOROETHENE	ND	5	.2
TRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER	ИD	5	.2
TERT-AMYL METHYL ETHER	מא	5	.2
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
1.2-DICHLOROETHANE-D4	95	65 - 135	

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	95	65 - 135
TOLUENE-D8	93	75 - 125
BROMOFLUOROBENZENE	98	75-125

R.L.: Reporting limit

* : Out of QC

E : Exceeded calibration range

B : Found in associated method blank

: Value between R.L. and MDL : Value from dilution analysis

 Lab File ID: RGD021
 Matrix
 : WATER

 Ext Btch ID: V094G03
 % Moisture
 : NA

 Calib. Ref.: RFD135
 Instrument ID
 : T-094

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
4 4 4 TOLOW ODOETHANE	ND	5	.2
1,1,1-TRICHLOROETHANE	ND	1	.5
1,1,2,2-TETRACHLOROETHANE	ND	5	. 2
1,1,2-TRICHLOROETHANE	ND	Ś	.2.2.2.2.2.5.5.5.2.3.2.2
1,1-DICHLOROETHANE	ND	5 5 .5	.2
1,1-DICHLOROETHENE	ND	š	. 2
1,2-DICHLOROETHANE	МD	· 5	12
1,2-DICHLOROPROPANE	ND	50	.5
METHYL ETHYL KETONE	ND	50	٠,٠
2-HEXANONE	ND	50	ś
4-METHYL-2-PENTANONE (MIBK)	ND	50	ś
ACETONE	ND	.5	5
BENZENE	ND ND	٠, ﴿	
BROMODICHLOROMETHANE	ND ND	ξ	٠. ٦
BROMOFORM	ND	5 5 5 .5	
BROMOMETHANE	ND	ś	. 5
CARBON TETRACHLORIDE	ND		.2
CHLOROBENZENE	ND	5 5 5 5 5	.5
CHLOROETHANE	ND	ź	.2 .2 .2
CHLOROFORM	ND	ź	.5
CHLOROMETHANE	ND	ξ	.5
CIS-1,2-DICHLOROETHENE	ND D	5	.2
CIS-1,3-DICHLOROPROPENE	ND		.5
DIBROMOCHLOROMETHANE	ND	ξ	د
ETHYLBENZENE	ND	٠٤	- 5
XYLENES	.48J	1	.2 .2 .2 .2
W AUT OU OBING	.400 ND	έ,	
YLENE CHLORIDE	ND	ź	.,
STYRENE	ND	í	.2 .2
TETRACHLOROETHYLENE	ND ND	5 .5 .5 .5 .5 .5 .5 .5	.2
TOLUENE	ND		.2
TRANS-1, 2-DICHLOROETHENE	ND	ŕ	.2
TRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND ND	50	.5
VINYL ACETATE	ND D	.5	.2
VINYL CHLORIDE	ND	20	٠. ۲
TERT-BUTYL ALCOHOL	ND D	5	5 .2
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER		5	.2
TERT-AMYL METHYL ETHER	ND	ر	.2
CHOCOCATE DADAMETERS	% RECOVERY	QC LIMIT	

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1.2-DICHLOROETHANE-D4	101	65-135
TOLUENE-D8	104	75 - 125
BROMOFLUOROBENZENE	109	75 - 125

R.L.: Reporting limit

* : Out of QC

E : Exceeded calibration range
B : Found in associated method blank
J : Value between R.L. and MDL
D : Value from dilution analysis

Client : SES-TECH Date Collected: 06/27/06 Date Received: 06/27/06
Date Extracted: 06/29/06 20:47 Project : CAMP PENDLETON, UST SITE 14137 Ratch No. : 06F281

ple | ID: 10-14137-034

| Samp | ID: F281-07 Analyzed: 06/29/06 20:47 Date Dilution Factor: 1 Lab File ID: RFD562 Ext 8tch ID: VO94F51 : WATER Matrix % Moisture : NA Calib. Ref.: RFD135 Instrument ID : T-094

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.2
1,1,2,2-TETRACHLORGETHANE	ND	ĺ	
1,1,2-TRICHLOROETHANE	ND	Ś	ž
1,1-DICHLOROETHANE	ND	5	.2
1,1-DICHLOROETHENE	ND	.5 .5	.2.2.2.2.5.5.5.2.2.3
1,2-DICHLOROETHANE	ND	.5	.2
1,2-DICHLOROPROPANE	ND	5	.2
METHYL ETHYL KETONE	ND	50	.2
2- HEXANONE	DN	50	5
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	ND	50	5
BENZENE	ND	.5	.2
BROMOD I CHLOROMETHANE	ND	5	.2
BROMOFORM	ND	5	.3
BROMOMETHANE	ND	5	.2
CARBON TETRACHLORIDE	ND	.5	.2
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5	.2
CHLOROFORM	ND	5 5 5 .5 5	.2
CHLOROMETHANE	ND	5	.2
CIS-1,2-DICHLOROETHENE	ND	2	.2
CIS-1,3-DICHLOROPROPENE	ND	• • 2	.2
DIBROMOCHLOROMETHANE ETHYLBENZENE	ND	ž	.2
XYLENES	ND ND	. 5 5	.2 .2
- ^1 ceres	9.9	1	.2
HYLENE CHLORIDE	ND		۶.
RENE	ND ND	5	.5 .2
TETRACHLOROETHYLENE	ND	5	.2
TOLUENE	םא םא	5 5 5 .5	.2
TRANS-1,2-DICHLOROETHENE	ND	.5	.2
TRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.ž
ETHYL TERT-BUTYL ETHER	ND	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2
		-	

SURROGATE PARAMETERS		% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4		94	65 - 135
TOLUENE - D8		95	75 - 125
BROMOFLUOROBENZENE	•	99	75 - 125

R.L.: Reporting limit

: Out of QC

E Exceeded calibration range

: Found in associated method blank : Value between R.L. and MDL : Value from dilution analysis

Vial: 14

Data File : D:\HPCHEM\1\DATA\06F29\RFD562.D

Acq On : 29 Jun 2006 8:47 pm Sample

Operator: AS : TO94 : 06F281-07 25mls Inst : DF=1.0 Multiplr: 1.00

Misc MS Integration Params: 524TAIL.P Quant Time: Jun 30 11:57 2006

Quant Results File: VO94F15.RES

Quant Method : D:\HPCHEM\1\METHODS\VO94F15.M (RTE Integrator)

Title : METHOD 8260

Last Update : Fri Jun 16 15:55:32 2006

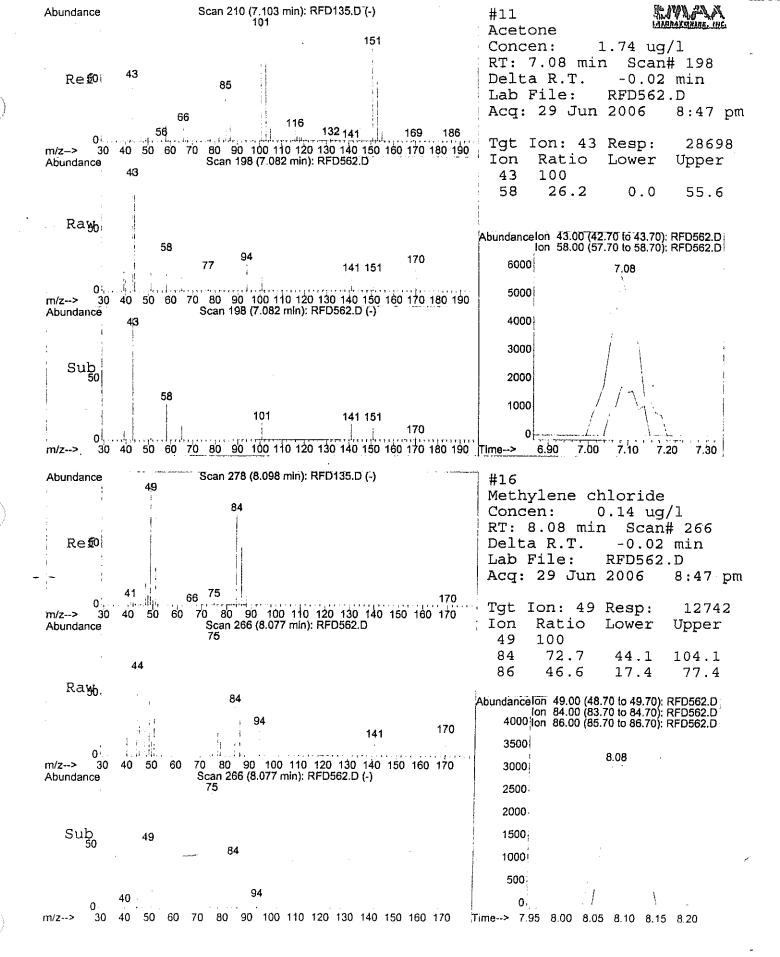
Response via : Initial Calibration

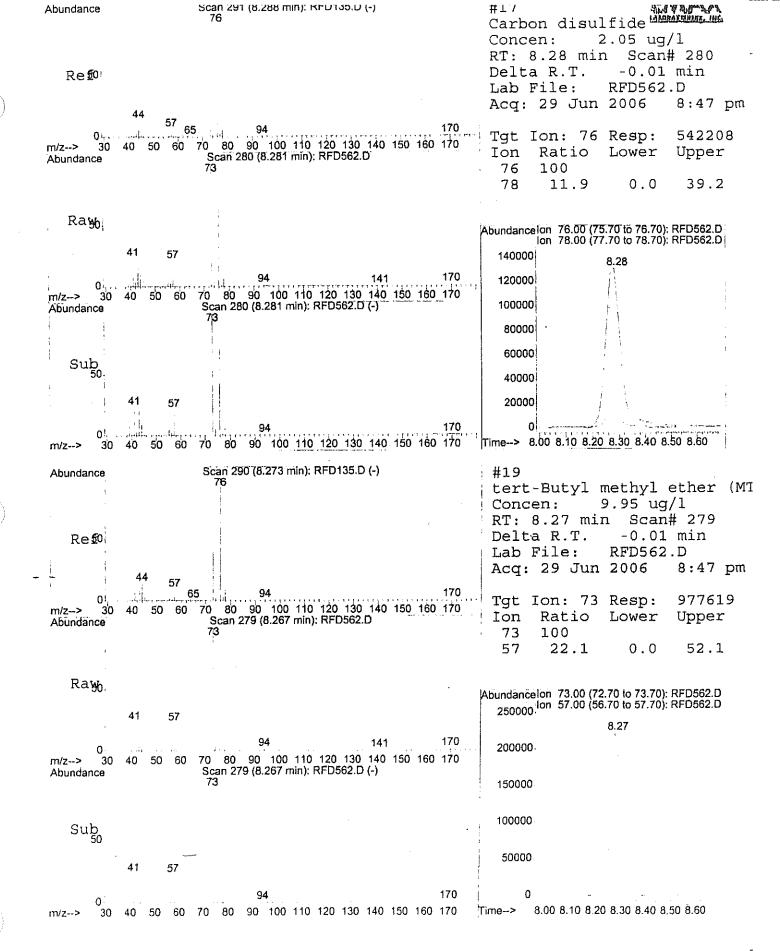
DataAcq Meth : VO94F15

Internal Standards	R.T.	QIon	Response	Conc Units De	v(Min)
1) 1,4-DIFLUOROBENZENE 36) CHLOROBENZENE-D5 66) 1,2-DICHLOROBENZENE-D4	18.14	117	/2529425 /2036154 347003	10.00 ug/l 10.00 ug/l 10.00 ug/l	-0.02 0.03 -0.02
System Monitoring Compounds 35) 1,2-Dichloroethane-d4	11.43	65	448730	9 44 110/1	0 00
Spiked Amount 10.000	11.15	05	Recove	9.44 ug/l ry = $/ 94.40$	¥
49) Toluene-d8	14.93	98	2420024	9.52 ug/l	9.00
Spiked Amount 10.000				ry = 795.20	8
70) 4-Bromofluorobenzene	20.86	95	535483	9.86/ug/l	-0.02
Spiked Amount 10.000			Recove	$ry = \frac{1}{98.60}$	*
Target Compounds			•	Q	value
11) Acetone	7.08	43	28698	1.74 ug/1	99
16) Methylene chloride	8.08	49	12742	0.14 ug/l	
, = · • · · · · · · · · · · · · · · · · ·	8.28	76	542208	2.05 yg/l	
19) tert-Butyl methyl ether (M	8.27		977619	9.95 ug/l	100
40) Benzene	11.67	78	41768	0.13 ug/l	70

(#) = qualifier out of range (m) = manual integration RFD562.D VO94F15.M Fri Jun 30 11:57:50 2006

Data File: D:\HPCHEM\1\DATA\06F29\RFD562.D Vial: : 29 Jun 2006 8:47 pm Operator: AS Sample : 06F281-07 25mls Inst : TO94 Misc Multiplr: 1.00 : DF=1.0MS Integration Params: 524TAIL.P Quant Time: Jun 30 11:57 2006 Quant Results File: VO94F15.R : D:\HPCHEM\1\METHODS\VO94F15.M (RTE Integrator) Method Title : METHOD 8260 Last Update : Fri Jun 16 15:55:32 2006 Response via : Initial Calibration TIC: RFD562.D Abundance 3400000 3200000 3000000 2800000 2600000 24000001 2200000 2000000 1800000 16000001 1400000 Carberte Bargitar (In) ether (MTBE), T 1200000 1,2-DICHLOROBENZENE-D4,1 10000001 1,2-Dichloroethane-04,S 800000 600000 Methylene chlonde, T 400000 200000 Time--> 6.00 8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00 24.00 26.00 28.00 30.00 RFD562.D Fri Jun 30 11:57:51 2006 VO94F15.M Page 2





40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 Time-->

12.00

11.80

11.60

50

39

m/z-->

Date Collected: 06/27/06 Client : SES-TECH

Project : CAMP PENDLETON, UST SITE 14137
Batch No. : 06F281
Pample ID: 10-14137-035

D Samp ID: F281-08 Date Received: 06/27/06
Date Extracted: 06/29/06 21:26
Date Analyzed: 06/29/06 21:26
Dilution Factor: 1

ab File ID: RFD563 Ext Btch ID: VO94F51 Calib. Ref.: RFD135 Matrix : WATER % Moisture : NA Instrument ID : T-094

PARAMETERS	RESULTS	RL	MDL
	(ug/L)	(ug/L)	(ug/L)
PARAMETERS 1,1,1-TRICHLOROETHANE 1,1,2,2-TETRACHLOROETHANE 1,1,2-TRICHLOROETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,1-DICHLOROETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROETHANE 1,2-DICHLOROPROPANE METHYL ETHYL KETONE 2-HEXANONE 4-METHYL-2-PENTANONE (MIBK) ACETONE BENZENE BROMODICHLOROMETHANE BROMOFORM BROMOMETHANE CARBON TETRACHLORIDE CHLOROETHANE CHLOROETHANE CHLOROFORM CHLOROMETHANE CIS-1,2-DICHLOROETHENE CIS-1,3-DICHLOROPROPENE DIBROMOCHLOROMETHANE ETHYLBENZENE XYLENES MTBE 7-THYLENE CHLORIDE 7-YRENE 7-TRACHLOROETHENE TOLUENE TRANS-1,2-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE TRANS-1,3-DICHLOROPROPENE TRANS-1,2-DICHLOROETHENE TRANS-1,2-DICHLOROETHENE TRANS-1,3-DICHLOROPROPENE TRICHLOROETHENE VINYL ACETATE VINYL ACETATE VINYL ACETATE VINYL ALCOHOL DISOPROPYL ETHER	CONTRACTOR	ug/L) 5155555555555555555555555555555555555	(ug/L) . 2222222225555522322222222222222222222
ETHYL TERT-BUTYL ETHER	ND	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
1,2-DICHLOROETHANE-D4	101	65-135	
TOLUENE-D8	102	75-125	
BROMOFLUOROBENZENE	106	75-125	

Reporting limit
Out of QC

Exceeded calibration range Found in associated method blank Ε Value between R.L. and MDL Value from dilution analysis

Date Collected: 06/27/06 Project : SES-TECH
Project : CAMP PENDLETON, UST SITE 14137
Batch No. : 06F281

| le | ID: 10-14137-036 |
| Samp ID: F281-09 |
| Last File ID: RFD564 |
| Ext Rtch ID: WD06664 Client : SES-TECH Date Received: 06/27/06
Date Extracted: 06/29/06 22:05
Date Analyzed: 06/29/06 22:05 Dilution Factor: 1 Matrix : WATER % Moisture : NA Instrument ID : T-094 Ext 8tch ID: V094F51 Calib. Ref.: RFD135

PARAMETERS RESULTS RL (ug/L) (ug/L) (ug/L) (ug/L)	MDL I/L)
1,1,1-TRICHLOROETHANE ND 5 1,1,2,2-TETRACHLOROETHANE ND 1	.2
1/1/E/E IEIKHONOBINATE	
1,1,2-TRICHLOROETHANE ND 5 1,1-DICHLOROETHANE ND 5	222222555223
1 1 - DICHLOROETHENE ND 5	.2
1,2-DICHLOROETHANE ND .5	.2
1,2-DICHLOROPROPANE ND 5	.2
METHYL ETHYL KETONE ND 50	.2
2-HEXANONE ND 50	5
4-METHYL-2-PENTANONE (MIBK) ND 50	5
ACETONE ND 50	5
BENZENE ND .5	.2
BROMODICHLOROMETHANE ND 5 BROMOFORM ND 5	. 2
BROMOFORM ND 5	٠.১
BROMOMETHANE 5	.2
BROMOMETHANE ND 5 CARBON TETRACHLORIDE ND .5 CHLOROBENZËNE ND 5 CHLOROETHANE ND 5	.2
CHLOROBENZENE ND 5	.2 .2
01120110m111111111	.2
on and an	.2
UILLONG IC I III MIC	.2
CIS-1,2-DICHLOROETHENE ND 5 CIS-1,3-DICHLOROPROPENE ND 5	.z
A LEPONOCUL OPONETIANE	.2
STUVI DENZEME ND .5	.2
VVI THEE ND 5	.2
MTRE .21J 1	.2
HYLENE CHLORIDE ND 5	.5
RENE ND 5	.2
TETRACHLOROETHYLENE ND 5	.2
TOLUENE ND .5	.2
YVLENE CHLORIDE	.2
TRANS-1,3-DICHLOROPROPENE ND .5	.2
	.2
VINYL ACETATE ND 50	.5
VINYL CHLORIDE ND .5	5
ICKI DOLLE VECOURE	.2
D11001 (101) = 0.1101	.2
Citiz levi parie erica	.2
TERT-AMYL METHYL ETHER ND 5	
SURROGATE PARAMETERS % RECOVERY QC LIMIT	
1,2-DICHLOROETHANE-D4 102 65-135	
TOLUENE-D8 101 75-125	
BROMOFLUOROBENZENE \$ 106 75-125	

R.L.: Reporting limit

Out of QC

Exceeded calibration range Found in associated method blank Value between R.L. and MDL : Value from dilution analysis

QC SUMMARIES

Date Collected: NA
Date Received: 06/29/06 Client : SES-TECH : CAMP PENDLETON, UST SITE 14137 Project Project : CAMP PEND Batch No. : 06F281 The ID: MBLK1W Samp ID: VO94F51Q File ID: RFD556 Date Extracted: 06/29/06 16:53 Analyzed: 06/29/06 16:53 Date Dilution Factor: 1 : WATER Matrix Ext Btch ID: V094F51 Calib. Ref.: RFD135 % Moisture : NA Instrument ID : T-094

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/l)
1,1,1-TRICHLOROETHANE	ND	5 1	.2 .2
1,1,2,2-TETRACHLOROETHANE	ND	5	.2
1,1,2-TRICHLOROETHANE	ND	7	.2
1,1-DICHLOROETHANE	ND ND	5 5	2
1,1-DICHLOROETHENE	ND ND	.5	.2
1,2-DICHLOROETHANE	ND	.5	.2
1,2-DICHLOROPROPANE	ND	50	.5
METHYL ETHYL KETONE	ND ND	50	5
2-HEXANONE	ND	50	5
4-METHYL-2-PENTANONE (MIBK)	ND ND	50	Š
ACETONE	ND ND	.5	.2
BENZENE	ND		.2
BROMODICHLOROMETHANE	ND ND	Ę	. 1
BROMOFORM	ND CM	Ę	.2
BROMOMETHANE	ND	ξ	.5
CARBON TETRACHLORIDE	ND	55555555555	.2
CHLOROBENZENE	ND CN	ź	.ž
CHLOROETHANE	ND	ź	.2
CHLOROFORM	ND	Ś	.2
CHLOROMETHANE	ND	ź	.2 .2
CIS-1, Z-DICHLOROETHENE	ND	. 5	.2
CIS-1,3-DICHLOROPROPENE	ND	5 5 .5	. ž
DIBROMOCHLOROMETHANE	ND	. Š	.2 .2
ETHYLBENZENE	· ND	15	.2
XYLENES	ND	5 1	. 2
MTBE CHLORIDE	ND	5	.5
RENE	ND	5	.2
TRACHLOROETHYLENE	ND	5	.2
TOLUENE	ND	5 5 5	.2
TRANS-1,2-DICHLOROETHENE	ND	5	.2
TRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER	ND	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2
PM Ante Detail Comm			

% RECOVERY	QC LIMIT
95	65 - 135
97	75 - 125
106	75-125
	95 97

R.L.: Reporting limit

Out of QC

: Exceeded calibration range Found in associated method blank Value between R.L. and MDL

Value from dilution analysis

EMAX QUALITY CONTROL DATA LCS/LCD ANALYSIS

CLIENT:

SES-TECH

CAMP PENDLETON, UST SITE 14137

PROJECT: BATCH NO .:

06F281

SW 5030B/8260B METHOD:

.... % MOISTURE: NΑ

WATER MATRIX: DILUTION FACTOR: 1

1

SAMPLE ID: LAB SAMP ID: LAB FILE ID:

DATE EXTRACTED:

MBLK1W V094F51Q

V094F51L RFD553

RFD556 06/29/0616:53 06/29/0614:56 06/29/0614:56 V094F51 06/29/0616:53

V094F51C RFD554 06/29/0615:35 06/29/0615:35 V094F51

DATE COLLECTED: NA

DATE ANALYZED: PREP. BATCH: CALIB, REF:

V094F51 RFD135

RFD135

RFD135

06/29/06 DATE RECEIVED:

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	8S RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT	MAX RPD (%)
1,1-Dichloroethene Benzene Chlorobenzene Toluene Trichloroethene	ND ND ND ND	10 10 10 10 10	9.46 9.28 9.91 9.83 9.63	95 93 99 98 96	10 10 10 10 10	9.42 9.03 9.75 9.57 9.35	94 90 98 96 93	0 3 2 3 3	75-125 75-125 75-125 75-125 75-125 75-125	20 20 20 20 20 20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT	BSD RSLT (ug/L)	BSD % REC	QC LIMIT
1,2-Dichloroethane-d4	10	9.01	90	10	8.75	87	65-135
Toluene-d8	10	9.25	92	10	8.93	89	75-125
Bromofluorobenzene	10	9.95	99	10	9.62	96	75-125

Date Collected: NA Client : SES-TECH Project : CAMP PENDLETON, UST SITE 14137 Batch No. : 06F281 Received: 07/07/06 Date Date Extracted: 07/07/06 17:54 mple ID: MBLK2W
) Samp ID: VO94G03Q
...o File ID: RGD019
Ext 8tch ID: VO94G03 Date Analyzed: 07/07/06 17:54 Dilution Factor: 1 : WATER Matrix % Moisture : NA Instrument ID : T-094 Calib. Ref.: RFD135

PARAMETERS	RÉSULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.2
1,1,2,2-TETRACHLOROETHANE	, ND	1	.2
1,1,2-TRICHLOROETHANE	ND	5	. 2
1,1-DICHLOROETHANE	ND		.2
1,1-DICHLOROETHENE	ND	5 5	.2
1,2-DICHLOROETHANE	ND	.5	.2
1,2-DICHLOROPROPANE	ND	.,	,2
METHYL ETHYL KETONE	ND	50	.2
2-HEXANONE	ND ND	50	
4-METHYL-2-PENTANONE (MIBK)	ND	50	ś
ACETONE	ND	50	Š
BENZENE	ND		5 5 2 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
BROMODICHLOROMETHANE	ΝĎ	`5	.5
BROMOFORM	ND	Ś	
BROMOMETHANE	ND	Š	.,
CARBON TETRACHLORIDE	ND	.5	.5
CHLOROBENZENE	ND	5	.5
CHLOROETHANE	ND	.55555555555555	.5
CHLOROFORM	ND	5	.2 .2 .2 .2
CHLOROMETHANE	ND	5	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
D I BROMOCHLOROMETHANE	ND.	5	2
ETHYLBENZENE	DN	.5	.2 .2 .2 .5
XYLENES	ND	5	.2
MTBE	ND	1	.2
THYLENE CHLORIDE	ND	5	.5
RENE	ND	5	.2
TETRACHLOROETHYLENE	ND	5	.2
TOLUENE	ND	.5	.2
TRANS-1,2-DICHLORGETHENE	ND	5 5 .5 5 .5	.2 .2 .2 .5 .2 .5 .2 .2 .2
TRANS-1,3-DICHLOROPROPENE	ND	.5	.2
TRICHLOROETHENE	ND	5	.2
VINYL ACETATE	ND	50	.5
VINYL CHLORIDE	ND	.5	.2
TERT-BUTYL ALCOHOL	ND	20	5
DIISOPROPYL ETHER	ND	5	.2
ETHYL TERT-BUTYL ETHER	ND	5	.2
TERT-AMYL METHYL ETHER	ND	5	.2
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
1,2-DICHLOROETHANE-D4	95	65 - 135	

98

R.L.: Reporting limit

* : Out of QC

BROMOFLUOROBENZENE

TOLUENE-D8

E : Exceeded calibration range
B : Found in associated method blank
J : Value between R.L. and MDL
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA LCS/LCD ANALYSIS

CLIENT:

SES-TECH

PROJECT:

LAB SAMP ID: LAB FILE ID:

DATE EXTRACTED:

CAMP PENDLETON, UST SITE 14137

BATCH NO .:

06F281

METHOD: SW 5030B/8260B

ATRIX: WATER

DILUTION FACTOR: 1 SAMPLE ID:

1 MBLK2W

V094G03Q

V094G03L RGD019 RGD016

07/07/0617:54

DATE ANALYZED: 07/07/0617:54 PREP. BATCH:

V094G03 RFD135

RGD017 07/07/0615:58 07/07/0616:37 07/07/0615:58 07/07/0616:37

V094G03 V094G03 RFD135 **RFD135**

1

V094G03C

% MOISTURE:

DATE COLLECTED: NA

DATE RECEIVED: 07/07/06

75-125

75-125

CALIB. REF: ACCESSION:

BLNK RSLT SPIKE AMT BS RSLT BS SPIKE AMT BSD RSLT BSD RPD QC LIMIT MAX RPD **PARAMETER** (ug/L) (ug/L) (ug/L) % REC (ug/L) (ug/L) % REC (%) (%) (%) 1.1-Dichloroethene ND 10 11.9 119 10 11.5 75-125 20 Benzene ND 10 10 100 10 9.84 98 ż 75-125 20 Chlorobenzene ND 10 10.9 109 10 10.3 103 75-125 6 20 Toluene ND 10 11 110 10 10.5 105 75-125 20 Trichloroethene ND 10 10.2 102 10 10.1 101 20 75-125

SPIKE AMT BS RSLT BS SPIKE AMT BSD RSLT BSD QC LIMIT SURROGATE PARAMETER (ug/L) (ug/L) % REC (ug/L) % REC (ug/L) (%) 1,2-Dichloroethane-d4 10 8.85 88 10 8.88 89 65-135

Toluene-d8 10 9.3 93 10 9.28 93 Bromofluorobenzene 10 9.99 100 9.91 10 99

EMAX QUALITY CONTROL DATA MS/MSD ANALYSIS

CLIENT: PROJECT:

SES-TECH

CAMP PENDLETON, UST SITE 14137

BATCH NO.: METHOD:

06F281

SW 5030B/8260B

mATRIX:

WATER

% MOISTURE:

NA

LAB SAMP ID: LAB FILE ID:

DATE EXTRACTED:

DILUTION FACTOR: 1 SAMPLE ID: 10

10-14137-033 F281-06R F281-06M

F281-068 RFD568

RGD021 07/07/0619:11 07/07/0619:11 RFD567 06/30/0600:03 06/30/0600:03 V094F51

06/30/0600:43 06/30/0600:43 V094F51

DATE COLLECTED: 06/27/06

DATE ANALYZED: PREP. BATCH: CALIB. REF:

V094G03 **RFD135**

RFD135

RFD135

DATE RECEIVED: 06/27/06

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT	MSD RSLT (ug/L)	MSD % REC	RPO (%)	QC LIMIT	MAX RF
1,1-Dichloroethene Benzene Chlorobenzene Toluene Trichloroethene	ND ND ND ND ND	10 10 10 10 10	11.2 11.1 11.7 11.6 11.4	112 111 117 116 114	10 10 10 10 10	11.3 11.7 12 11.8 11.9	113 117 120 118 119	0 5 2 2 5	75-125 75-125 75-125 75-125 75-125	2(2(2(2(

SURROGATE PARAMETER	SPIKE AMT (ug/L)	M\$ RSLT (ug/L)	MS % REC	SPIKE AMT	MSD RSLT (ug/L)	MSD % REC	QC LIMIT
1,2-Dichloroethane-d4	10	10.9	109	10	11	110	65-135
Toluene-d8	10	11.3	113	10	11.4	114	75-125
Bromofluorobenzene	10	11.6	116	10	11.6	116	75-125

LABORATORY REPORT FOR

SES-TECH

CAMP PENDLETON, UST SITE 14137

METHOD 3520C/8270 SIM SEMI VOLATILE ORGANICS BY GC/MS

SDG#: 06F281

CASE NARRATIVE

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

SDG:

06F281

METHOD 3520C/8270C SIM SEMI VOLATILE ORGANICS BY GC/MS

Eight (8) water samples were received on 06/27/06 for Semi Volatile Organic analysis by Method 3520C/8270C SIM in accordance with USEPA SW846, 3rd edition.

1. Holding Time

Analytical holding time was met.

2. Tuning and Calibration

Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

Method blank was free of contamination at half of the reporting limit.

4. Surrogate Recovery

Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

Recoveries were within QC limit.

6. Matrix Spike/Matrix Spike Duplicate

No MS/MSD sample was designated in this SDG.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met.

LAB CHRONICLE SEMI VOLATILE ORGANICS BY GC/MS

	, 11								Instrument ID	nt ID : I-048
						WATER		17 11 14 14 15 17 18 18 19 19 19 19		
Client Sample ID		Laboratory Sample 10	Dilution	% 		ш	Sample	Calibration Prep.	n Prep.	
f			1	1000		Date 1 me	Data FN	Data FM	Batch	Kotes
MBLK1W		SVF039WB		NA	06/30/0618:34	06/29/0612:00	RF2505	RFZ008	SVF039W	Method Blank
10.1/127-030	Ţ	SVF039WL	ş	Α×	06/30/0618:54	06/29/0612:00	RF2506	RFZ008	SVF0394	Lab Control Sample (LCS)
10-14131-029	الشيجيب	1.281-02	76.	ΑX	06/30/0619:13	06/29/0612:00	RF2507	RFZ008	SVF039W	Field Sample
10-1/127-031		F281-04	76	MA	06/30/0619:51	06/29/0612:00	RFZ509	RFZ008	SVF039W	Field Sample
10-1/127-032		F281-05	-	ΑN	06/30/0620:10	06/29/0612:00	RF2510	RFZ008	SVF039W	Field Sample
10-1/127-033		F281-06	76.	ΑN	06/30/0620:29	06/29/0612:00	RFZ511	RFZ008	SVF039W	Field Sample
10-1/127-022ms		F281-06M	56.	NA NA	06/30/0620:48	06/29/0612:00	RFZ512	RFZ008	SVF039W	Matrix Spike Sample (MS)
10-14-137-033M3D		F281-U6S	76.	¥.	06/30/0621:08	06/29/0612:00	RFZ513	RFZ008	SVF0394	MS Duplicate (MSD)
10-14137-034		F281-UZ	.94	ď.	06/30/0621:27	06/29/0612:00	RFZ514	RFZ008	SVF039#	Field Sample
10-16147-010		F281-09	76	¥	06/30/0622:05	06/29/0612:00	RF2516	RFZ008	SVF039W	Field Sample
10-14137-035		r261-05W	76.	¥	07/07/0620:24	06/29/0612:00	RGZ006	RFZ008	SVF0394	Field Sample
		1281-USM	8.	¥	07/07/0620:43	06/29/0612:00	DC2007	800730	18070070	tiold sample

FN - Filename % Moist - Percent Moisture

SAMPLE RESULTS

Date Collected: 06/27/06 : SES-TECH Client ect : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

ыatch No. : 06F281

Date Analyzed: 06/30/06 19:13 Sample ID: 10-14137-029

Lab Samp ID: F281-02 Lab File ID: RFZ507 Ext Btch ID: SVF039W Calib. Ref.: RFZ008

Dilution Factor: .94 : WATER Matrix : NA % Moisture Instrument ID : T-048

Date Extracted: 06/29/06 12:00

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)
ACENAPHTHENE	ND	.94	.19
ACENAPHTHYLENE	ND	.94	.19
ANTHRACENE	ND	1.9	.19
BENZO(A)ANTHRACENE	ND	1.9	. 19
BENZO(A)PYRENE	ND	.94	. 19
BENZO(B)FLUORANTHENE	ND	.94	. 19
BENZO(K) FLUORANTHENE	ND	1.9	. 19
BENZO(G,H,I)PERYLENE	ND	-94	.19
CHRYSENE	ND	1.9	.19
DIBENZO(A,H)ANTHRACENE	ND	.94	.19
FLUORANTHENE	ND	1.9	.19
FLUORENE	ND	1.9	.19
INDENO(1,2,3-CD)PYRENE	ND	.94	.19
THTHALENE	ND	-94	.19
ANANTHRENE	ND	.94	.19
PYRENE	ND	1.9	. 19
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	

79 50-130 TERPHENYL-D14

Client : SES-TECH Date Collected: 06/27/06

P t : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

No. : 06F281 Date Extracted: 06/29/06 12:00

Sample ID: 10-14137-030 Date Analyzed: 07/07/06 20:24

Lab Samp ID: F281-03W Dilution Factor: .94
Lab File ID: RGZ006 Matrix : WATER
Ext Btch ID: SVF039W % Moisture : NA
Calib. Ref.: RFZ008 Instrument ID : T-048

	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PARAMETERS	(09/1/		
	ND	.94	.19
ACENAPHTHENE	ND	.94	.19
ACENAPHTHYLENE	***	1.9	.19
ANTHRACENE	, ND		.19
BENZO(A)ANTHRACENE	ND	1.9	.19
BENZO(A)PYRENE	ND	-94	
BENZO(B) FLUORANTHENE	ND	.94	.19
BENZO(K) FLUORANTHENE	ND	1.9	.19
BENZO(G, H, I)PERYLENE	ND	.94	. 19
CHRYSENE	ND	1.9	.19
DIBENZO(A, H)ANTHRACENE	ND	.94	.19
	ND	1.9	.19
FLUORANTHENE	ND	1.9	.19
FLUORENE	ND	.94	.19
INDENO(1,2,3-CD)PYRENE	ND	.94	.19
NAPHTHALENE	ND	.94	.19
PHENANTHRENE	ND	1.9	.19
PYDENE	MD	1.7	• • • •
SUKROGATE PARAMETERS	% RECOVERY	QC LIMIT	
TERPHENYL-D14	80	50-130	



Çlient : SES-TECH Date Collected: 06/27/06

roject : CAMP PENDLETON, UST SITE 14137

Date Received: 06/27/06

Batch No. : 06F281

Date Extracted: 06/29/06 12:00

Sample ID: 10-14137-031

Date Analyzed: 06/30/06 19:51

Lab Samp [D: F281-04 Lab File ID: RFZ509

Dilution Factor: .94

Matrix : WATER

Ext Btch ID: SVF039W

% Moisture : NA

Calib. Ref.: RFZ008

Instrument ID : T-048

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)

ACENAPHTHENE	ND	.94	.19
ACENAPHTHYLENE	ND	.94	.19
ANTHRACENE	ND	1.9	.19
BENZO(A)ANTHRACENE	ND	1.9	.19
BENZO(A)PYRENE	ND	.94	.19
BENZO(B) FLUORANTHENE	' ND	.94	.19
BENZO(K)FLUORANTHENE	ND	1.9	.19
BENZO(G,H,I)PERYLENE	ND	.94	.19
CHRYSENE	ND	1.9	.19
DIBENZO(A,H)ANTHRACENE	ND	.94	. 19
FLUORANTHENE	ND	1.9	. 19
FLUORENE	ND	1.9	.19
INDENO(1,2,3-CD)PYRENE	ND	.94	.19
\PHTHALENE	ND	.94	.19
:::HENANTHRENE	ND	.94	.19
PYRENE	ND	1.9	.19
SURROGATE _PARAMETERS	% RECOVERY	QC LIMIT	

TERPHENYL-D14	80	50-130	

ient : SES-TECH Date Collected: 06/27/06 oject : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Batch No. : 06F281 Date Extracted: 06/29/06 12:00 Sample ID: 10-14137-032 Date Analyzed: 06/30/06 20:10

 Lab Samp ID: F281-05
 Dilution Factor: 1

 Lab File ID: RFZ510
 Matrix : WATER

 Ext Btch ID: SVF039W
 % Moisture : NA

 Calib. Ref.: RFZ008
 Instrument ID : T-048

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)

ACENAPHTHENE	ND	1	.2
ACENAPHTHYLENE	ND	1	.2
ANTHRACENE	ND	2	.2
BENZO(A)ANTHRACENE	ND	2	-2
BENZO(A)PYRENE	ND	1	.2
BENZO(B)FLUORANTHENE	ND	1	.2
BENZO(K)FLUORANTHENE	ND	2	.2
BENZO(G,H,I)PERYLENE	ND	1	.2
CHRYSENE	ND	2	.2
DIBENZO(A, H)ANTHRACENE	ND	1	.2
FLUORANTHENE	ND	· 2	.2
FLUORENE	ND	2	.2
INDENO(1,2,3-CD)PYRENE	ND	1	.2
PHTHALENE	ND	1	.2
୍ୟର୍ମENANTHRENE	ND	1	.2
PYRENE	ND	2	.2
SURROGATE-PARAMETERS	% RECOVERY	QC LIMIT	

TERPHENYL-D14 66 50-130



SW 3520C/8270C SIM SEMI VOLATILE ORGANICS BY GC/MS

Slient : SES-TECH Date Collected: 06/27/06 oject : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Batch No. : 06F281 Date Extracted: 06/29/06 12:00 Sample ID: 10-14137-033 Date Analyzed: 06/30/06 20:29

Lab Samp ID: F281-06 Dilution Factor: .94 Lab File ID: RFZ511 Matrix : WATER Ext Btch ID: SVF039W % Moisture : NA Calib. Ref.: RFZ008 Instrument ID : T-048

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)

ACENAPHTHENE	ND	.94	.19
ACENAPHTHYLENE	ND	.94	.19
ANTHRACENE	ND	. 1.9	. 19
BENZO(A)ANTHRACENE	ND	1.9	.19
BENZO(A)PYRENE	ND	.94	.19
BENZO(B)FLUORANTHENE	ND	.94	.19
BENZO(K)FLUORANTHENE	ND	1.9	.19
BENZO(G,H,I)PERYLENE	ND	.94	.19
CHRYSENE	ND	1.9	.19
DIBENZO(A, H)ANTHRACENE	ND	.94	.19
FLUORANTHENE	ND	1.9	. 19
FLUORENE	ND	1.9	.19
INDENO(1,2,3-CD)PYRENE	ND	-94	.19
PHTHALENE	ND	.94	.19
PHENANTHRENE	ND	.94	.19
PYRENE	ND	1.9	.19
SURROGATE-PARAMETERS	% RECOVERY	QC LIMIT	
TERRHENYI -014	69	50-130	

TERPHENYL-D14 50-130

RL: Reporting Limit

SW 3520C/8270C SIM SEMI VOLATILE ORGANICS BY GC/MS

ient : SES-TECH Date Collected: 06/27/06
oject : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Batch No. : 06F281 Date Extracted: 06/29/06 12:00 Sample ID: 10-14137-034 Date Analyzed: 06/30/06 21:27

 Lab Samp ID: F281-07
 Dilution Factor: .94

 Lab File ID: RFZ514
 Matrix : WATER

 Ext Btch ID: SVF039W
 % Moisture : NA

 Calib. Ref.: RFZ008
 Instrument ID : T-048

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)

ACENAPHTHENE	ND	.94	. 19
ACENAPHTHYLENE	ND	-94	. 19
ANTHRACENE	ND	1.9	. 19
BENZO(A)ANTHRACENE	ND	1.9	. 19
BENZO(A)PYRENE	ND	.94	. 19
BENZO(B)FLUORANTHENE	ND	.94	. 19
BENZO(K)FLUORANTHENE	ND	1.9	. 19
BENZO(G,H,I)PERYLENE	ND	.94	. 19
CHRYSENE	ND	1.9	.19
DIBENZO(A,H)ANTHRACENE	ND	.94	.19
FLUORANTHENE	ND	1.9	. 19
FLUORENE	ND	1.9	.19
INDENO(1,2,3-CD)PYRENE	ND	.94	.19
PHTHALENE	DИ	.94	. 19
HENANTHRENE	ND	.94	. 19
PYRENE	ND	1.9	.19
SURROGATE -PARAMETERS	% RECOVERY	QC LIMIT	
TERPHENYL-D14	68	50-130	

RL: Reporting Limit

Data File : D:\CHEMDATA\06F30\RFZ514.D

Acq On : 30 JUN 2006 21:27

Operator: SG Inst : TO48

Sample : 06F281-07 Misc

Multiplr: 1.00

Vial: 19

MS Integration Params: RTEINT.P Quant Time: Jul 5 15:03 2006

Quant Results File: SV48F02.RI

Quant Method : C:\HPCHEM\1\METHODS\SV48F02.M (RTE Integrator)

Title : METHOD 8270C SIM GCMS-QP5000 Last Update : Fri Jun 02 15:54:34 2006

Response via : Initial Calibration

DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
 1,4-Dichlorobenzene-d4 20) Phenanthrene-d10 28) Perylene-d12 	2.95 7.03 10.84	152 188 264	295438 538742 301958	10.00 ng 10.00 ng 10.00 ng	0.00 0.00 0.00
System Monitoring Compounds 3) Phenol-d5 27) Terphenyl-d14	2.66 8.58	99 244	33630 116062	0.81 ng 3.40 ng	0.00
Target Compounds 31) bis(2-Ethylhexyl)phthalate	9.65	149	78176	1.27 ng	Qvalue 95

(#) = qualifier out of range (m) = manual integration Wed Jul 05 15:03:37 2006 RFZ514.D SV48F02.M

TO48

Vial: 19

Data File : D:\CHEMDATA\06F30\RFZ514.D

: 30 JUN 2006 21:27

: 06F281-07 Sample

Misc

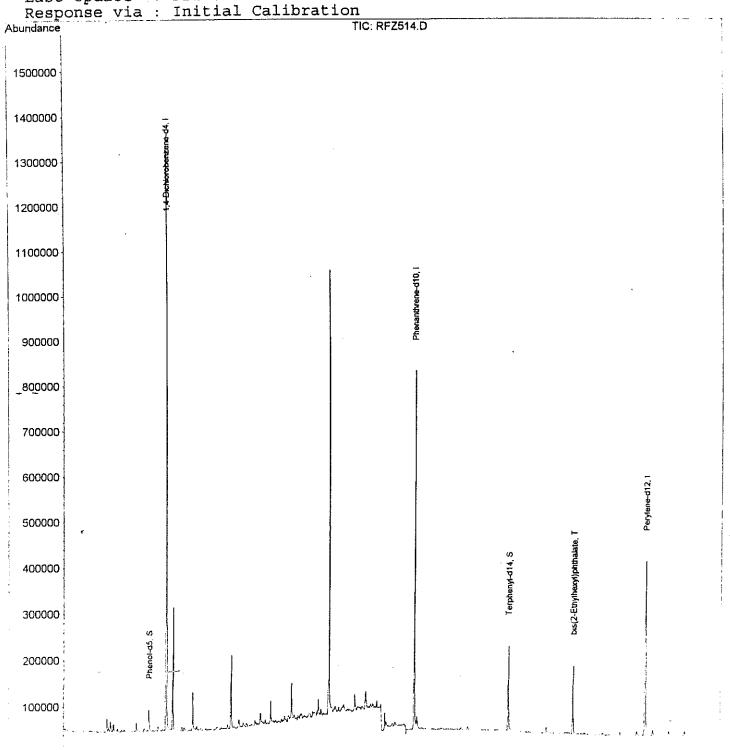
Operator: SG Inst : TO48 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Results File: SV48F02.RF Quant Time: Jul 5 15:03 2006

: C:\HPCHEM\1\METHODS\SV48F02.M (RTE Integrator) Method

: METHOD 8270C SIM GCMS-QP5000 Title Last Update : Fri Jun 02 15:54:34 2006



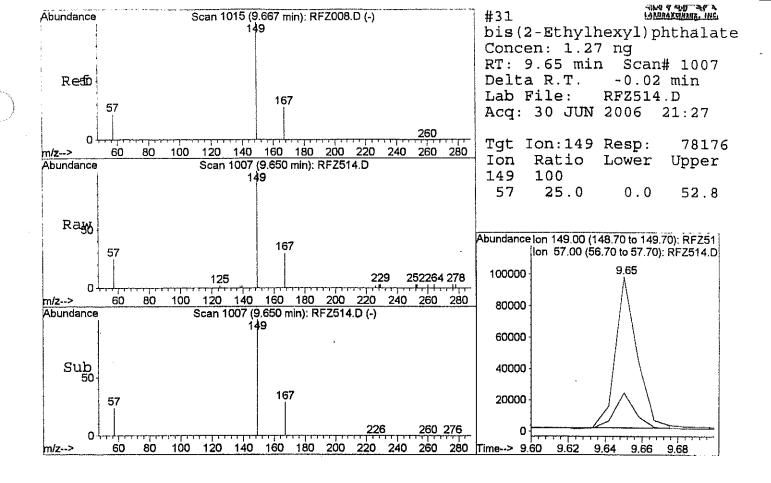
150 200 250 300 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50 10.00 10.50 11.00 11.50

RFZ514.D SV48F02.M

Wed Jul 05 15:03:38 2006

TO48

Page 2



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SW 3520C/8270C SIM SEMI VOLATILE ORGANICS BY GC/MS

Date Collected: 06/27/06 : SES-TECH P : CAMP PENDLETON, UST SITE 14137
Ba.... No. : 06F281 Date Received: 06/27/06

Date Extracted: 06/29/06 12:00 Sample ID: 10-14137-035 Date Analyzed: 07/07/06 20:43

Lab Samp ID: F281-08W Dilution Factor: .96 Matrix : WATER Lab File ID: RGZ007 Ext 8tch ID: SVF039W % Moisture : NA Calib. Ref.: RFZ008 Instrument ID : T-048

•	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)
ACENAPHTHENE	ND	.96	.19
ACENAPHTHYLENE	ND	.96	.19
ANTHRACENE	ND	1.9	.19
BENZO(A)ANTHRACENE	ND	1.9	.19
BENZO(A)PYRENE	, ND	.96	. 19
BENZO(B)FLUORANTHENE	ND	.96	. 19
BENZO(K)FLUORANTHENE	ND	1.9	. 19
BENZO(G,H,I)PERYLENE	ND	.96	.19
CHRYSENE	ND	1.9	.19
DIBENZO(A,H)ANTHRACENE	ND	.96	_19
FLUORANTHENE	ND	1.9	. 19
FLUORENE	ND	1.9	. 19
INDENO(1,2,3-CD)PYRENE	ND	.96	.19
NAPHTHALENE	ND	.96	.19
PHENANTHRENE	ND	.96	.19
Py	ND :	1.9	.19
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
TERPHENYL-014	69	50-130	

RL: Reporting Limit

SW 3520C/8270C SIM SEMI VOLATILE ORGANICS BY GC/MS

Date Collected: 06/27/06 : SES-TECH pject : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Date Extracted: 06/29/06 12:00 Játch No. : 06F281 Date Analyzed: 06/30/06 22:05 Sample ID: 10-14137-036

Dilution Factor: .94 Lab Samp ID: F281-09 Matrix : WATER Lab File ID: RFZ516 % Moisture : NA Ext Btch ID: SVF039W Instrument ID : T-048 Calib. Ref.: RFZ008

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)
ACENAPHTHENE	ND	.94	. 19
ACENAPHTHYLENE	ND	.94	. 19
ANTHRACENE	ND	1.9	. 19
BENZO(A)ANTHRACENE	ND	1.9	. 19
BENZO(A)PYRENE	ND	.94	. 19
BENZO(B)FLUORANTHENE	ND	.94	. 19
BENZO(K)FLUORANTHENE	. ND	1.9	. 19
BENZO(G,H,I)PERYLENE	ND	.94	.19
CHRYSENE	ND	1.9	. 19
DIBENZO(A, H)ANTHRACENE	ND	.94	. 19
FLUORANTHENE	ND	1.9	. 19
FLUORENE	ND	1.9	. 19
INDENO(1,2,3-CD)PYRENE	ND	.94	. 19
APHTHALENE	ND	. 94	. 19
ÅENANTHRENE	ND .	.94	.19
PYRENE	ND	1.9	.19
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
	25	EO 470	

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	85	50-130

RL: Reporting Limit

QC SUMMARIES

SW 3520C/B270C SIM SEMI VOLATILE ORGANICS BY GC/MS

Client : SES-TECH Date Collected: NA

roject : CAMP PENDLETON, UST SITE 14137 Date Received: 06/29/06

Batch No. : 06F281 Sample ID: MBLK1W Lab Samp ID: SVF039WB

pa Di Ma

Date Extracted: 06/29/06 12:00

Date Analyzed: 06/30/06 18:34

Dilution Factor: 1

Matrix % Moisture

: WATER : NA

Ext Btch ID: SVF039W Calib. Ref.: RFZ008

Lab File ID: RFZ505

Instrument ID : T-048

	RESULTS	RL	MDL
PARAMETERS	(ug/L)	(ug/L)	(ug/L)
~ ~ ~ ~ ~ ~ ~ ~ ~			
ACENAPHTHENE	ND	1	.2
ACENAPHTHYLENE	ND	1	.2
ANTHRACENE	DM	2	.2
BENZO(A)ANTHRACENE	ND	2	.2
BENZO(A)PYRENE	ND	1	.2
BENZO(B)FLUORANTHENE	ND	1	.2
BENZO(K) FLUORANTHENE	ND	2	.2
BENZO(G,H,I)PERYLENE	ND	1	.2
CHRYSENE	ND	2	.2
DIBENZO(A, H)ANTHRACENE	ND	1	.2
FLUORANTHENE	ND	· 2	-2
FLUORENE	ND	2	.2
INDENO(1,2,3-CD)PYRENE	ND	1	.2
APHTHALENE	ND	1	.2
PHENANTHRENE	ND	1	.2
PYRENE	ND	2	.2

SURROGATE- PARAMETERS % RECOVERY QC LIMIT
TERPHENYL-D14 77 50-130

RL: Reporting Limit

EMAX QUALITY CONTROL DATA LCS ANALYSIS

CLIENT:

SES-TECH

ROJECT:

CAMP PENDLETON, UST SITE 14137

ATCH NO.:

06F281

METHOD:

SW 3520C/8270C SIM

MATRIX:

WATER

% MOISTURE:

NA

DILUTION FACTOR: 1

SAMPLE ID:

MBLK1W

LAB SAMP ID:

SVF039WB

LAB FILE ID:

RFZ505

RFZ506

SVF039WL

1

DATE EXTRACTED: 06/29/0612:00 06/29/0612:00 DATE ANALYZED:

06/30/0618:34 06/30/0618:54

DATE RECEIVED:

DATE COLLECTED: NA

06/29/06

PREP. BATCH:

SVF039W

SVF039W

CALIB. REF:

RFZ008

RFZ008

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	QC LIMIT
Acenaphthene	ND	10	6.49	65	40-130
Acenaphthylene	ND	10	6.28	63	40-130
Anthracene	ND	10	6.31	63	50-130
Benzo(a)anthracene	ND	10	6.83	68	50-130
Benzo(a)pyrene	ND	10	6.43	64	50-130
Benzo(b)fluoranthene	ND	10	6.99	70	50-130
enzo(k)fluoranthene	ND	10	6.24	62	30-150
denzo(g,h,i)perylene	ND	10	6.53	65	50-130
Chrysene	ND	10	6.52	65	50-130
Dibenzo(a,h)anthracene	ND	10	6.47	65	40-140
Fluoranthene	ND	10	6.41	64	50-130
Fluorene	ИD	10	6.74	67	40-130
Indeno(1,2,3-cd)pyrene	ND	10	6.47	65	30-140
Naphthalene	ND	10	5.82	58	30-130
Phenanthrene	ND.	10	6.01	60	40-130
Pyrene	ND	10	6.19	62	40-130

	SPIKE AMT	8S RSLT	BS	QC LIMIT
SURROGATE PARAMETER	(ug/L)	(ug/L)	% REC -	(%)
Terphenyl-d14	5	3.82	76	50-130



EMAX QUALITY CONTROL DATA MS/MSD ANALYSIS

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

ATCH NO .:

06F281

METHOD:

SW 3520C/8270C SIM

MATRIX:

WATER

.95

.94

% MOISTURE:

NA

SAMPLE ID: LAB SAMP ID:

10-14137-033

F281-06

F281-06M

F281-06S

RFZ511 RFZ512 06/29/0612:00 06/29/0612:00

RFZ513 06/29/0612:00

DATE EXTRACTED: DATE ANALYZED:

DILUTION FACTOR: .94

06/30/0620:29

06/30/0620:48

06/30/0621:08

DATE COLLECTED: 06/27/06 DATE RECEIVED:

06/27/06

PREP. BATCH:

LAB FILE ID:

SVF039W

SVF039W

SVF039W

CALIB. REF:

RFZ008 RFZ008

RFZ008

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT	MAX (%
Acenaphthene	ND	9.5	5.38	57	9.4	5.1	54	5	40-130	
Acenaphthylene	ND	9.5	5.23	55	9.4	4.96	53	4	40-130	
Anthracene	ND	9.5	5.67	60	9.4	5.55	59	2	50-130	
Benzo(a)anthracene	ND	9.5	6.07	64	9.4	6.1	65	2	50-130	
Benzo(a)pyrene	ND	9.5	5.58	5 9	9.4	5.7	61	3	50-130	
Benzo(b)fluoranthene	ND	9.5	6.82	72	9.4	6.26	67	7	50-130	
enzo(k)fluoranthene	ND	9.5	4.98	52	9.4	5.54	59	13	30-150	
denzo(g,h,i)perylene	ND	9.5	5.74	60	9.4	5.8	62	3	50-130	
Chrysene	ND	9.5	5 .63	59	9.4	5.74	61	3	50-130	
Dibenzo(a,h)anthracene	ND	9.5	5.71	60	9.4	5.87	62	3	40-140	:
Fluoranthene	ND	9.5	5.8	61	9.4	5.81	62	2	50-130	
Fluorene	ND	9.5	6.04	64	9.4	5.5	58	10	40-130	:
Indeno(1,2,3-cd)pyrene	ND	9.5	5.68	60	9.4	5.82	62	3	30-140	:
Naphthalene	ND	9.5	4.66	49	9.4	4.65	49	0	30-130	:
Phenanthrene	ND	9.5	5.44	57	9.4	5.41	58	2	40-130	;
Pyrene	ND	9.5	5.73	60	9.4	5.8	62	3	40-130	3

	SPIKE AMT	MS RSLT	MS	SPIKE AMT	MSD RSLT	MSD	QC LIMIT	
SURROGATE PARAMETER	(ug/L)	(ug/L)	% REC	(ug/L)	(ug/L)	% REC	(%)	
				• • • • • • • •				
Terphenyl -d14	4.75	3.84	81	4.7	3 83	я1	50-130	



LABORATORY REPORT FOR

SES-TECH

CAMP PENDLETON, UST SITE 14137

METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 06F281



CASE NARRATIVE

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

SDG:

06F281

METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Eight (8) soil samples were received on 06/27/06 for Total Petroleum Hydrocarbons by Extraction analysis by Method 3520C/8015B in accordance with SW846 3RD Edition.

1. Holding Time

Analytical holding time was met. Extraction was performed on 06/29/06 and completed on 06/30/06.

2. Calibration

Initial calibration was seven points for Diesel. %RSDs were within 20%. Continuing calibrations were carried out at 12-hour intervals and all recoveries were within 85-115%.

3. Method Blank

Method blank was free of contamination at half of the reporting limit.

4. Surrogate Recovery

All recoveries were within QC limits.

5. Lab Control Sample

Recovery was within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

Sample F281-06 was spiked. Recoveries were within QC limits.

7. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met. Sample results were quantitated from C10 to C24 using Diesel (C10-C24) calibration factor.

Samples F281-06 to -08 displayed motor oil-like patterns.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Cl.ent : SES-TECA	ECH				71 12 12 13 14 14 15 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18				SDG NO.	: 06F281
Project : CAMP	PENDLETON	CAMP PENDLEION, UST SITE 14137	137						Instrument ID	
111111111111111111111111111111111111111	10 4 11 11 11 11 11 11 11 11 11 11 11 11 1			## ## ## ## ## ## ## ## ## ## ## ## ##						
	r				WATER	ER				
Client		taboratory	aboratory Dilution	%	Analysis	Extraction	Sample	Calibration Prep.	ı Prep.	
Sample ID		Sample 1D	Factor	Moist	DateTime	DateTime	Data FN	Data FN	Batch	Notes
			1 1 1 1 1	1 1 1 1	111111111111111111111111111111111111111	, , , , , , , , , , , , , , , , , , , ,	1 1 1 1		1 1 1 1 1	* * * * * * * * * * * * * * * * * * * *
KBLK1x		DSF044WB		NA	06/30/0613:30	06/29/0612:30	LF30012A	L.F30010A	DSF044W	Method Blank
LCS1W	wwc-ee	DSF044WL	 ک	A'N	06/30/0613:47	06/29/0612:30	LF30013A	LF30010A	DSF044W	Lab Control Sample (LCS)
LC01#	ma'r	DSF044WC		N.A.	06/30/0614:03	06/29/0612:30	LF30014A	LF30010A	DSF044W	LCS Duplicate
10-14137-029		F281-02	76.	¥.	06/30/0614:54	06/29/0612:30	LF30017A	LF30010A	DSF044W	Field Sample
10-14137-030		F281-03	· 46.	ĄN	06/30/0615:11	06/29/0612:30	LF30018A	LF30010A	DSF044W	Field Sample
10-14137-031		F281-04	. 76.	¥	06/30/0615:28	06/29/0612:30	LF30019A	LF30010A	DSF044W	Field Sample
10-14137-032		F281-05	%	×	06/30/0615:44	06/29/0612:30	LF30020A	LF30010A	DSF044W	Field Sample
10-14137-033		F281-06	76	Ā	06/30/0616:01	06/29/0612:30	LF30021A	LF30010A V	DSF044W	Field Sample
10-14137-034		F281-07	%.	¥¥	06/30/0621:41	06/29/0612:30	LF30041A	LF30034A	DSF044W	Field Sample
10-14137-035		F281-08	76.	NA A	06/30/0621:58	06/29/0612:30	LF30042A	LF30034A	DSF044W	Field Sample
10-14137-036		F281-09	. 46.	N.	06/30/0617:28	06/29/0612:30	LF30026A	LF30022A~	DSF044W	Field Sample
10-14137-033MS		F281-06M	· 76.	¥.	06/30/0616:54	06/29/0612:30	LF30024A	LF30022A"	DSF0449	Matrix Spike Sample (MS)
10-14137-033MSD		F281-06S	76.	AN.	06/30/0617:11	06/29/0612:30	LF30025A	LF30022A V	DSF044W	MS Duplicate (MSD)

1



SAMPLE RESULTS



Client : SES-TECH Date Collected: 06/27/06

Date Received: 06/27/06

Project : CAMP PENDLETON, UST SITE 14137 Tetch No. : 06F281 Date Extracted: 06/29/06 12:30 imple ID: 10-14137-029 Date Analyzed: 06/30/06 14:54

Lab Samp ID: F281-02 Dilution Factor: .94 : WATER Lab File ID: LF30017A Matrix Ext Btch ID: DSF044W % Moisture : NA Instrument ID : GCT105 Calib. Ref.: LF30010A

RESULTS RL MDL **PARAMETERS** (mg/L) (mg/L) (mg/L) ------____ -----DIESEL ND .094 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT -----------...... HEXACOSANE 101 65 - 135

RL : Reporting Limit Parameter H-C Range Diesel C10-C24



Client : SES-TECH Date Collected: 06/27/06
Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06
Statch No. : 06F281 Date Extracted: 06/29/06

 Batch No. : 06F281
 Date Extracted: 06/29/06 12:30

 Jample ID: 10-14137-030
 Date Analyzed: 06/30/06 15:11

Lab Samp ID: F281-03 Dilution Factor: .94
Lab File ID: LF30018A Matrix : WATER
Ext Btch ID: DSF044W % Moisture : NA
Calib. Ref.: LF30010A Instrument ID : GCT105

 PARAMETERS
 RESULTS (mg/L) (mg/L) (mg/L)
 RL (mg/L) (mg/L)

 DIESEL
 ND .094 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT
HEXACOSANE 105 65-135

RL: Reporting Limit
Parameter H-C Range
Diesel C10-C24



Client : SES-TECH Date Collected: 06/27/06 : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06 Project tch No. : 06F281 Date Extracted: 06/29/06 12:30 Date Analyzed: 06/30/06 15:28 imple ID: 10-14137-031 Dilution Factor: .94 Lab Samp ID: F281-04 Lab File ID: LF30019A Matrix : WATER % Moisture : NA Ext 8tch ID: DSF044W Calib. Ref.: LF30010A Instrument ID : GCT105

 PARAMETERS
 RESULTS
 RL
 MDL

 DIESEL
 ND
 .094
 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT
HEXACOSANE 102 65-135

RL : Reporting Limit
Parameter H-C Range
Diesel C10-C24



: SES-TECH Date Collected: 06/27/06

Project : CAMP PENDLETON, UST SITE 14137 Batch No. : 06F281 Date Received: 06/27/06

Date Extracted: 06/29/06 12:30 Sample ID: 10-14137-032 Lab Samp ID: F281-05 Date Analyzed: 06/30/06 15:44

Dilution Factor: .94 Lab File ID: LF30020A Matrix : WATER Ext 8tch ID: DSF044W % Moisture : NA Calib. Ref.: LF30010A Instrument ID : GCT105

RESULTS MDL **PARAMETERS** (mg/L)(mg/L)(mg/L) DIESEL ND .094 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT -------HEXACOSANE 103 65-135

RL : Reporting Limit Parameter H-C Range Diesel C10-C24



: SES-TECH Date Collected: 06/27/06 Client oject : CAMP PENDLETON, UST SITE 14137 ch No. : 06F281 Date Received: 06/27/06 Project Date Extracted: 06/29/06 12:30 Date Analyzed: 06/30/06 16:01 imple ID: 10-14137-033 Dilution Factor: .94 Lab Samp ID: F281-06 Lab File ID: LF30021A Matrix : WATER : NA Ext Btch ID: DSF044W % Moisture Instrument ID : GCT105 Calib. Ref.: LF30010A RESULTS RL MDL (mg/L) (mg/L)(mg/L)**PARAMETERS** -----.024 .094 DIESEL

% RECOVERY

104

QC LIMIT

65-135

RL: Reporting Limit
Parameter H-C Range
Diesel C10-C24

SURROGATE PARAMETERS

HEXACOSANE



Client : SES-TECH Date Collected: 06/27/06
Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Batch No. : 06F281 Date Extracted: 06/29/06 12:30 Date ID: 10-14137-034 Date Analyzed: 06/30/06 21:41

Lab Samp ID: F281-07 Dilution Factor: .94

Lab File ID: LF30041A Matrix : WATER

Ext Btch ID: DSF044W % Moisture : NA

Calib. Ref.: LF30034A Instrument ID : GCT105

PARAMETERS RESULTS RL MOL (mg/L) (mg/L) (mg/L)

DIESEL 2.4 .094 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT
HEXACOSANE 110 65-135

RL: Reporting Limit
Parameter H-C Range
Diesel C10-C24

METHOD 8015 by GC/FID EMAX Laboratories, Inc.

Inst. Name:

: GC105 (Offline)

File Method : D:\EZCHROM\CHROM\105F30\LF30.041 : D:\EZCHROM\METHODS\DS105F28.met : D:\EZCHROM\SEQUENCE\105F30.seq

Sequence:

: 0:\EZCHROW\\\ : 06F281-07

Sample ID Acquired

: 06/30/06 21:41:37

Printed

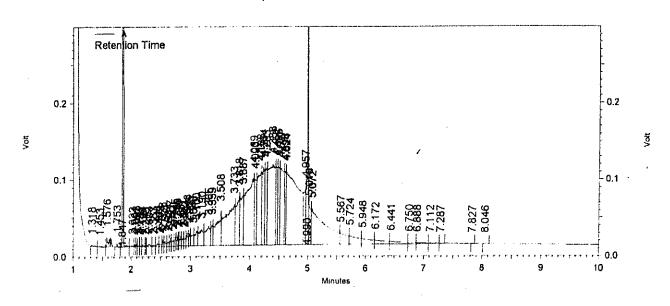
: 07/03/06 16:00:12

User

: System

A Results

Name	Retention Time	Area	Average RF	ESTD concentration
BROMOBENZENE HEXACOSANE	1.847 4.990	1442668 799710	15831.70808 29142.35319	91.125 27.442
Totals		2242378		118.567
DIESEL(TOTAL) DIESEL(C10-C24)		8839319 7385638	29757.13629 29230.81486	301.767 252.370
DIESEL(C10-C28)		8351652	29265.15514	285.379
Totals		24576609		839.515



Software Version: Version 3.1.7



Date Collected: 06/27/06 Client : SES-TECH Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06 tch No. : 06F281 Date Extracted: 06/29/06 12:30 Date Analyzed: 06/30/06 21:58 imple ID: 10-14137-035 Dilution Factor: .94 Lab Samp ID: F281-08 : WATER Lab File ID: LF30042A Matrix Ext Btch ID: DSF044W % Moisture : NA Instrument ID : GCT105 Calib. Ref.: LF30034A

RESULTS

122

RL

65-135

MDL

 PARAMETERS
 (mg/L)
 (mg/L)
 (mg/L)

 DIESEL
 2.4
 .094
 .024

 SURROGATE PARAMETERS
 % RECOVERY
 QC LIMIT

RL: Reporting Limit
Parameter H-C Range
Diesel C10-C24

HEXACOSANE



Client : SES-TECH Date Collected: 06/27/06
Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06

Project : CAMP PENDLETON, UST SITE 14137 Date Received: 06/27/06 | Date Extracted: 06/29/06 12:30

 Jample ID: 10-14137-036
 Date Analyzed: 06/30/06 17:28

 Lab Samp ID: F281-09
 Dilution Factor: .94

 Lab File ID: LF30026A
 Matrix : WATER

 Ext Btch ID: DSF044W
 % Moisture : NA

 Calib. Ref.: LF30022A
 Instrument ID : GCT105

 PARAMETERS
 (mg/L)
 (mg/L)
 (mg/L)

 DIESEL
 ND
 .094
 .024

SURROGATE PARAMETERS % RECOVERY QC LIMIT
HEXACOSANE 101 65-135

RL : Reporting Limit
Parameter H-C Range
Diesel C10-C24



QC SUMMARIES



Client : SES-TECH Date Collected: NA

Project : CAMP PENDLETON, UST SITE 14137 Tatch No. : 06F281 Date Received: 06/29/06

Date Extracted: 06/29/06 12:30 Date Analyzed: 06/30/06 13:30 mple ID: MBLK1W cab Samp ID: DSF044WB

Dilution Factor: 1 Lab File ID: LF30012A Matrix

: WATER : NA % Moisture Ext Btch ID: DSF044W Calib. Ref.: LF30010A Instrument ID : GCT105

RESULTS PARAMETERS (mg/L) (mg/L) (mg/L)DIESEL ND . 1 .025

SURROGATE PARAMETERS % RECOVERY QC LIMIT _____ -----------107 65-135 **HEXACOSANE**

RL : Reporting Limit Parameter H-C Range Diesel C10-C24

EMAX QUALITY CONTROL DATA LCS/LCD ANALYSIS



CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

BATCH NO.: METHOD:

06F281

METHOD 3520C/8015B

MATRIX: DILUTION FACTOR: 1

WATER

SAMPLE ID:

MBLK1W

LAB SAMP ID: LAB FILE ID:

DATE ANALYZED:

PREP. BATCH:

CALIB. REF:

DSF044WB

DSF044WL LF30012A LF30013A

DATE EXTRACTED: 06/29/0612:30 06/29/0612:30 06/29/0612:30 06/30/0613:30 06/30/0613:47

DSF044W DSF044W LF30010A LF30010A

% MOISTURE:

06/30/0614:03 DSF044W

DSF044WC

LF30014A

LF30010A

NA

DATE COLLECTED: NA DATE RECEIVED: 06/29/06

ACCESSION:

PARAMETER

SURROGATE PARAMETER

BLNK RSLT (mg/L)

SPIKE AMT 88 RSLT (mg/L)

(mg/L) 4.87

BS SPIKE AMT % REC (mg/L) 97

BSD RSLT BSD (mg/L) % REC 4.65

RPD (%)

QC LIMIT MAX RPD (%) (%) 65 - 135

Diesel

Hexacosane

SPIKE AMT BS RSLT (mg/L) (mg/L)

. 25

. 291

% REC 116

BS

(mg/L) (mg/L) .25

BSD RSLT

SPIKE AMT

% REC .28

BSD

112 65-135

QC LIMIT

(%)

EMAX QUALITY CONTROL DATA MS/MSD ANALYSIS

CLIENT:

SES-TECH

CAMP PENDLETON, UST SITE 14137 PROJECT:

06F281

BATCH NO.: MOD:

METHOD 3520C/8015B

MATRIX: DILUTION FACTOR: .94

WATER

SAMPLE ID: LAB SAMP ID: LAB FILE ID: 10-14137-033

F281-06M F281-06 LF30021A

LF30024A

F281-06S LF30025A

.94

DATE EXTRACTED: 06/29/0612:30 06/29/0612:30 06/29/0612:30 06/30/0616:01 06/30/0616:54

06/30/0617:11

DATE COLLECTED: 06/27/06

% MOISTURE:

PREP. BATCH: CALIB. REF:

DATE ANALYZED:

DSF044W LF30010A DSF044W LF30022A DSF044W LF30022A DATE RECEIVED: 06/27/06

ACCESSION:

SPIKE AMT MSD RSLT MSD RPD QC LIMIT MAX RP SPIKE AMT MS RSLT MS SMPL RSLT % REC (mg/L) (mg/L) % REC (%) (%) (%) (mg/L) (mg/L) PARAMETER (mg/L) 4.7 3.28 67 4.7 65 - 135 .146 Diesel

1

MS SPIKE AMT MSD RSLT MSD QC LIMIT SPIKE AMT MS RSLT % REC (%) (mg/L) (mg/L) % REC (mg/L) (mg/L) SURROGATE PARAMETER 65-135 .235 .248 105 . 235 . 234 100 Hexacosane



LABORATORY REPORT FOR

SES-TECH

CAMP PENDLETON, UST SITE 14137

METHOD 300.0 ANIONS

SDG#: 06F281



CASE NARRATIVE

CLIENT:

SES-TECH

PROJECT:

CAMP PENDLETON, UST SITE 14137

SDG:

06F281

METHOD 300.0 ANIONS

Seven (7) water samples were received on 06/27/06 for Nitrate-N and Sulfate analyses by method 300.0 in accordance with "Method for Determination of Inorganic Anions by Ion Chromatography", EPA 600/84-017.

1. Holding Time

Analyses met holding time criteria.

2. Method Blank

Method blanks were free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

Lab control results were within QC limits.

4. Duplicate

Sample F281-06 was analyzed for duplicate. %RPD was within QC limit.

5. Matrix Spike

Sample F281-06 was spiked. Recovery was within QC limit.

6. Sample Analysis

Samples were analyzed according to the prescribed QC procedures. All criteria were met.

Nitrate-N was reported as Nitrogen concentration.

SAMPLE RESULTS

METHOD 300.0 NITRATE-N Ciient Project Batch No.

: SES-TECH : CAMP PENDLETON, UST SITE 14137 : 06F281 Matrix : WATER Instrument [D : 1100

	,											,	•
	EMAX	RESUL 1S			귍	문	Analysis	Extraction				Collection	Received
SAMPLE 1D	SAMPLE ID	(mg/L)	DLF MOIST		(mg/L)	(mg/L)	DATETIME	DATETIME	LFID	CAL REF	PREP BATCH	DATETIME	DATETIME
f	• • • • • • • • • • • • • • • • • • • •	1 1 1 4 2	1 1						1 1 1 1	;	1 1 1 1		t
MBLK1W	1CF051WB	QN		N.	٠.	50.	06/27/0616:56	ΝA	AF27-03	AF27-01	1CF051W		NA
LCS1W	1CF051WL	1.9		ΝĀ	٦.	50.	06/27/0617:13	KA	AF27-04	AF27-01	1CF051W	A.	NA
LCD1W	1CF051WC	1.89		NA A	۲.	.05	06/27/0617:31	NA	AF27-05	AF27-01	ICF051W	ΑN	NA
10-14137-029	F281-02	S	.	NA	Ψ.	50.	06/27/0621:38	¥¥	AF27-16	AF27-13	1CF051W	06/27/06	06/27/06
10-14137-030	F281-03	웊	-	¥	۲.	50.	06/27/0621:56	NA NA	AF27-17	AF27-13	1CF051W	06/27/06	06/27/06
10-14137-031	· F281-04	욧	-	AN	۲,		06/27/0622:13	AN.	AF27-18	AF27-13	1CF051W	06/27/06	06/21/06
10-14137-032	F281-05	R		¥.		9.	06/27/0622:31	¥2	AF27-19	AF27-13	1CF051W	06/27/06	90/22/90
10-14137-033	F281-06	2		Κ¥	***		06/27/0622:48	X.	AF27-20	AF27-13	1CF051W	06/27/06	90/22/06
10-14137-033DUP	F281-060	Q	4 -	NA	-:		06/27/0623:06	HA	AF27-21	AF27-13	1CF051W	06/27/06	06/27/06
10-14137-033MS	F281-06M	2.02	,- -	ΝΑ	۲.	.05	06/27/0623:24	WA	AF27-22	AF27-13	1CF051W	06/27/06	90/22/90
10-14137-034	F281-07	Q	, -	NA	-		06/27/0623:41	A.	AF27-23	AF27-13	1CF051W	06/27/06	06/27/06
14-14-055	F281-08	Q.	, -	NA	۲,	5	65:5290/22/90	¥¥	AF27-24	AF27-13	1CF051W	06/27/06	90/22/06

METHOD 300.0 SULFATE

: SES-TECH : CAMP PENDLETON, UST SITE 14137

: 06F281

Batch No. Project Client

Matrix : WATER Instrument ID : 1100

) # # #								16 10 16 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18					
	EMAX	RESULTS			ä	Ē	Analysis	Extraction				follection	Deceived
	Ci Light				1	2	Aliatysis.	רענו פרנוסו				בסי יברי וחו	עברב ו אבת
	SAMPLE 10	(mg/L)	DLF MOIST		(mg/L)	(mg/L)	DATETIME	DATETIME	LFID	CAL REF	PREP BATCH	DATETIME	DATETIME
		, , , , , ,	1 1 1	1111	(1 1 1 1 1 1	1 1 1 1 1 1 1		1 1 1	1 1 1 1			
	1CF054WB	Q		¥	٠.	52:	06/29/0612:56	A.	AF29-03	AF29-01	1CF054W	¥.X	A Z
	ICF054WL	6.4	_	¥	٦.	52.	06/29/0613:14	NA	AF29-04	AF29-01	1CF054W	A.N	NA
,	ICF054MC	4.88	-	¥.	ī,	\$3	06/29/0613:31	¥	AF29-05	AF29-01	1CF054W	K.	M.A.
	F281-02	173	20	¥	10	Ŋ	06/29/0617:51	N.	AF29-18	AF29-13	1CF054W	06/27/06	06/27/06
	F281-03	78.8	10	¥	Ŋ		06/29/0618:09	ď.	AF29-19	AF29-13	1CF054W	06/27/06	06/27/06
	F281-04	156	2	¥	Ŋ	2.5	06/29/0618:26	X.	AF29-20	AF29-13	1CF054W	06/21/06	06/27/06
	F281-05	161	20	¥	10	ហ	06/29/0618:44	¥.	AF29-21	AF29-13	ICF054W	06/27/06	06/27/06
	F281-06	133	23	¥	9	'n	06/29/0619:11	¥.	AF29-22	AF29-13	ICF054W	06/27/06	06/27/06
	F281-060	133	22	¥¥	9	2	06/29/0619:28	¥	AF29-23	AF29-13	ICF054W	06/27/06	06/27/06
	F281-06M	232	2	ΚA	9	2	06/29/0619:51	A.	AF29-24	AF29-13	ICF054W	06/27/06	06/27/06
	F281-07	7.06	10	ΜĄ	Ŋ	2.5	06/29/0620:43	NA NA	AF29-27	AF29-25	ICF054W	06/27/06	06/27/06
	F281-08	90.8	10	ΑN	S	2.5	06/29/0621:01	NA	AF29-28	AF29-25	ICF054W	06/27/06	06/27/06

wehore dare. Printed by:

Cherry Dam

U/40/4000 /:20:13 PM

Ident: Analysis from: AF27-23 F281-07

6/27/2006 11:41:41 PM

File:

q6272341.chw

Modified! Method:

IC100-E08.mtw

Run operator:

Cherry Dam

Analysis number:

18758

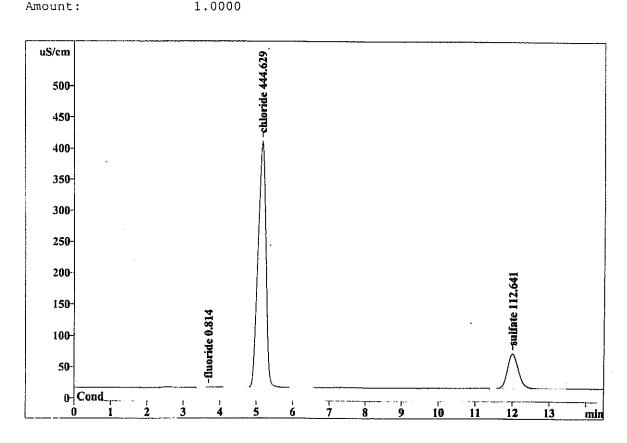
Last save: 6/27/2006 5:41:07 PM

Last save: 6/27/2006 11:56:08 PM

SAMPLE:

Vial number: Volume: Dilution:

23 1.0 µL 1.00 1.0000



Quantitation method: Custom

No	Retention	Height	Area	Conc.	Name
	min	uS/cm	uS/cm*sec	mg/L	
1	3.68	0.37	14.163	0.814	fluoride
2	5.16	393.82	5860.017	444.629	chloride
3	12.00	54.55	1094.366	112.641	sulfate
· · · 3	14.50	448.74	6968.546	558.084	

This report has been created by IC Net METROHM LTD

Printed by:

Cherry Dam

Ident:

Analysis from:

AF29-27 F281-07 DF=10 6/29/2006 8:43:52 PM

File:

Q6292043.CHW

Last save: 6/29/2006 8:58:18 PM

Method:

IC100-E08.mtw

Last save: 6/29/2006 11:05:42 A

Run operator:

Cherry Dam

Analysis number:

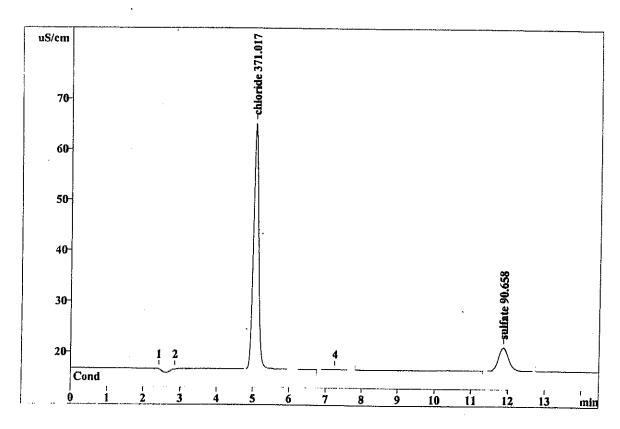
18853

SAMPLE:

Vial number: Volume: Dilution: Amount:

27 $1.0~\mu L$ 10.00

1.0000



Quantitation method: Custom

No	Retention	Height	Area	Conc.	Name
*	min	uS/cm	uS/cm*sec	mg/L	
1	2.42	0.36	4.569	0.000	
2	2.86	0.45	11.085	0.000	
3	5.04	48.37	487.779	371.017	chloride
4	7.25	0.07	1.907	0.000	
5	11.87	4.58	86.944	90.658	sulfate 🗸
5	14.50	53.83	592.284	461.675	

This report has been created by IC Net METROHM LTD



QC SUMMARIES

EMAX QUALITY CONTROL DATA LCS/LCD ANALYSIS

SES-TECH CAMP PENDLETON, UST SITE 14137

PROJECT:

06F281

06/27/0617:31 ICF051W AF27-01 1CF051WC AF27-05 06/27/0617:13 1CF051W AF27-01 1CF051WL AF27-04 06/27/0616:56 ICF051W AF27-01 METHOD 300.0 MBLK1W ICF051WB AF27-03 WATER DILUTION FACTOR: 1 DATE EXTRACTED: DATE ANALYZED: PREP. BATCH: CALIB. REF: LAB SAMP ID: LAB FILE ID: SAMPLE ID: BATCH NO.: METHOD: MATRIX:

¥

% MOISTURE:

ACCESSION:

_	
MAX RP(20
QC LIMIT MAX RPD	90-110
RPD (%)	0
BSD % REC	76
BSD RSLT BSD (mg/L) % REC	1.89
SPIKE AMT (mg/L)	2
BS X REC	ጀ
BS RSLT (mg/L)	1.9
	2
BLNK RSLT (mg/L)	G.
PARAMETER 	

DATE COLLECTED: NA DATE RECEIVED: NA

EMAX QUALITY CONTROL DATA

MS ANALYSIS

SES-TECH CAMP PENDLETON, UST SITE 14137

CLIENT: PROJECT:

06F281

METHOD 300.0 BATCH NO.: METHOD:

WATER MATRIX:

ž

% MOISTURE:

06/27/0623:24 ICF051W AF27-13 F281-06M AF27-22 06/27/0622:48 ICF051W AF27-13 10-14137-033 F281-06 AF27-20 DILUTION FACTOR: SAMPLE 10: LAB SAMP 10: LAB FILE 10: DATE EXTRACTE0: DATE ANALYZED: PREP. BATCH: CALIB. REF:

DATE COLLECTED: 06/27/06 DATE RECEIVED: 06/27/06

ACCESSION:

80-120 OC LIMIT (**%**) MS % REC 101 2.03 (mg/L) MS RSLT SPIKE AMT 111111111 (mg/L) SMPL RSLT · (mg/L) Nitrate-N PARAMETER

EMAX GUALITY CONTROL DATA OUPLICATE SAMPLE ANALYSIS

SES-TECH CAMP PENDLETON, UST SITE 14137

METHOD 300.0 06F281 BATCH NO.: CL TENT: PROJECT: METHOD:

06/27/06 06/27/06 ¥ DATE COLLECTED: DATE RECEIVED: % MOISTURE: 06/27/0623:06 ICF051W AF27-13 F281-06D AF27-21 06/27/0622:48 ICF051W AF27-13 10-14137-033 F281-06 AF27-20 WATER ¥ DILUTION FACTOR: DATE EXTRACTED: DATE ANALYZED: PREP. BATCH: CALIB. REF: SAMPLE 10: EMAX SAMP 10: LAB FILE 10: MATRIX:

	יוביי ייייייייייייייייייייייייייייייייי	(*)	200
1000	AFD KOLI GLEIMI	₹	0 20
T ISO IGIIO		!	9
SMPL BSLT	(1/00)		QK
	PARAMETER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nitrate-N

EMAX QUALITY CONTROL DATA LCS/LCD ANALYSIS

CL:ENT:

SES-TECH CAMP PENDLETON, UST SITE 14137

DATE COLLECTED: DATE RECEIVED: % MOISTURE: NA 06/29/0613:31 ICF054N AF29-01 1CF054WC AF29-05 NA 06/29/0613:14 1CF054W AF29-01 1CF054WL AF29-04 06/29/0612:56 06F281 METHOD 300.0 MBLK1W 1CF054WB AF29-03 1CF054W AF29-01 WATER DILUTION FACTOR: DATE EXTRACTED: DATE ANALYZED: SAMPLE 1D: LAB SAMP 1D: LAB FILE 1D: PREP. BATCH: CALIB. REF: BAICH NO.: METHOD: PROJECT: MATR1X:

≨

¥ ¥

EMAX QUALITY CONTROL DATA MS ANALYSIS

SES-TECH CAMP PENDLETON, UST SITE 14137 06F281

CLIENT: PROJECT: BATCH NO.:

1994年,1997年, METHOD 300.0

METHOD:

DATE COLLECTED: 06/27/06
DATE RECEIVED: 06/27/06 % MOISTURE: NA 06/29/0619:51 1CF054W AF29-13 F281-06M AF29-24 2 NA 06/29/0619:11 ICF054W AF29-13 10-14137-033 F281-06 MATRIX:

DILUTION FACTOR: 20

SAMPLE 1D: 10-14137

LAB SAMP 10: F281-06

LAB FILE 1D: AF29-22

DATE EXTRACTED: NA

DATE ANALYZED: 06/29/06

PREP. BATCH: 1CF054W

CALIB. REF: AF29-13

	SMPL RSLT	SMPL RSLT SPIKE AMT	MS RSLT	MS	MS QC LIMIT
PARAMETER	(mg/L)	(mg/L)	(mg/L) % REC (%)	% REC	(%)
	1 1 1 1	* * 7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	;	1 1 1 1
Sulfate	133	100	232	8	99 80-120

EMAX QUALITY CONTROL DATA DUPLICATE SAMPLE ANALYSIS

ANALYSES	
SAMPLE	
DUPLICATE	

SES-TECH

CLIENT:

PROJECT:	CAMP PENDLETON,	CAMP PENDLETON, UST SITE 14137		
BATCH NO.:	06F281			
METHOD:	METHOD 300.0	•		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			1k 10 10 11 11 11 11 11 11 11 11 11 11 11	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR: 20	20	20		
SAMPLE ID:	10-14137-033			
EMAX SAMP ID:	, F281-06	F281-06D		
LAB FILE 1D:	AF29-22	AF29-23		
DATE EXTRACTED:	NA	NA	DATE COLLECTED: 06/27/06	06/27/06
DATE ANALYZED:	06/29/0619:11	06/29/0619:28	DATE RECEIVED:	06/27/06
PREP. BATCH:	1CF054W	1CF054W		
CALIB. REF:	AF29-13	AF29-13		

RPD RSLT QC LIMIT	~ % ~	1 1 1 1	20
RPD RSLT	×	1 1 1 1 1	0
DUPL RSLT	(mg/L)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	133
SMPL RSLT	(mg/L)	1 1 1 1 1 1 1 1 1 1 1 1 1	133
	PARAMETER	: : : : : : : : : : : : : : : : : : : :	Sulfate